

Utah Department of Transportation Sign Manual



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Table of Contents

Part 1.	INTRODUCTION.....	4
1.A.	Overview and Purpose	4
1.B.	Status of Manual.....	4
1.C.	Application of Manual Guidelines	4
1.D.	Manual Content.....	4
1.E.	Relationship to Other Documents.....	5
1.E.1	References to other Documents	5
1.E.2	Precedence over Other Documents	7
1.F.	Approval Authority and Process	7
1.G.	Plans for signing.....	7
Part 2.	GENERAL DESIGN PRINCIPLES	8
2.A.	Function and Purpose of Signs.....	8
2.B.	Standardization of Application	8
2.C.	Excessive Use of Signs	9
2.D.	Classification of Signs	9
2.E.	Design of Signs.....	9
2.F.	Retroreflectivity and Illumination.....	11
2.G.	Sign Shapes and Colors.....	11
2.H.	Dimensions.....	12
2.I.	Symbols.....	13
2.J.	Word Messages	13
2.K.	Sign Borders	14
Part 3.	REGULATORY SIGNS	16
Part 4.	WARNING SIGNS	17
4. A.	Share the Road Plaques (W16-1P,WS16-1aP).....	17
4. B.	Open Range Plaques (WS16-19P, WS16-19aP)	18
Part 5.	GUIDE SIGNS	18
5.A.	General.....	19
5.A.1.	Sign Dimension	19
5.A.2.	Size and Style of Lettering and Signs	19
5.A.3.	Amount of Legend	20
5.A.4.	Interline and Edge Spacing	20
5.A.5.	Use of Arrows	21

5.A.6.	Use of Arrows for Interchange Guide Signs	23
5.A.7.	Use of Abbreviations	24
5.A.8.	Distance and Destination Signs	24
5.A.9	Specific Service (Logo) Signs	25
5.B.	CONVENTIONAL ROADS	25
5.B.1.	Numbered Highway Systems.....	25
5.B.2.	Route Signs and Auxiliary Signs	25
5.B.3.	Design of Route Signs	26
5.B.4.	Design of Route Sign Auxiliaries	27
5.B.5.	Junction Auxiliary Sign	27
5.B.6.	Combination Junction Sign	28
5.B.7.	Cardinal Direction Auxiliary Signs	28
5.B.8.	Auxiliary Signs for Alternative Routes	28
5.B.9.	TO, END, BEGIN, and TEMPORARY Auxiliary Signs	28
5.B.10.	Temporary Detour and Auxiliary Signs	28
5.B.11.	Advance Turn Arrow and Directional Arrow Auxiliary Signs	29
5.B.12	Lane Designation Auxiliary Signs	29
5.B.13.	Route Sign Assemblies.....	30
5.B.14.	Route Sign Assembly Mounting Height	30
5.B.15.	Prioritization of Route Sign Assemblies.....	31
5.B.16.	Junction Assembly	32
5.B.17.	Advance Route Turn Assembly	32
5.B.18.	Directional Assembly	32
5.B.19.	Combination Lane-Use/Destination Overhead Guide Sign	33
5.B.20.	Confirming or Reassurance Assemblies.....	33
5.B.21.	Trailblazer Assembly.....	34
5.B.22.	Memorial or Dedication Signing	34
5.B.23.	Scenic Byways Signing	35
5.B.24.	Additional Sign References.....	38
5.C.	Freeways and Expressways	40
5.C.1.	Overhead Signs	40
5.C.2.	Number of Signs at an Overhead Installation and Sign Spreading	41
5.C.3.	Pull-Through Signing.....	42
5.C.4.	Signing for Option Lanes and Splits and Multi-Lane Exits	42
5.C.5.	Design of System Interchange Overhead Arrow-per-Lane Guide Signs for Option Lanes.....	43
5.C.6.	Signing for Non-System Interchange Multi-Lane Exits with an Option Lane Drop	48
5.C.7.	Signing for Interchange Lane Drops (without optional lanes)	52
5.C.8.	Diagrammatic Signs	56
5.C.9.	Route signs	56
5.C.10.	At-Grade Intersection Signs.....	56
5.C.11.	Interchange Guide Signs	57
5.C.12.	Interchange Exit Numbering.....	57
5.C.13.	Interchange Classification	59
5.C.14.	Advance Guide Signs	59
5.C.15.	Next Exit Plaques	60
5.C.16.	Other Supplemental Guide Signs.....	60
5.C.17.	Exit Direction Signs	61
5.C.18.	Exit Gore Signs	63
5.C.19.	Post-Interchange Distance Signs	63
5.C.20.	Interchange Sequence Signs.....	68
5.C.21.	Community Interchanges Identification Signs.....	68

5.C.22.	NEXT XX EXITS Sign	69
5.C.23.	Destination Guide Signs.....	69
5.C.24.	Other Guide Sign References.....	70
5.C.25.	Freeway Sign Design Process.....	70
Part 6.	WORK ZONE SIGNING.....	71
Part 7.	SCHOOL ZONE SIGNING	72

Part 1. INTRODUCTION

1.A. OVERVIEW AND PURPOSE

The Utah Department of Transportation Sign Manual (UDOT Sign Manual or “Manual”) establishes the basic guidelines for the design of highway signing on the Utah State Highway System.

The Federal Highway Administration (FHWA) has approved the Utah Manual on Uniform Traffic Control Devices (MUTCD). The MUTCD and the UDOT 06C Policies, 07 Policies, and 08 Policies and UDOT Standard Drawings SN series and UDOT Standard Specifications Sections 02890 and 02891 provide guidance so highway signing can be designed in a uniform manner.

In this Manual, where the acronym MUTCD is used, it refers to the Utah MUTCD, not the National MUTCD.

Signing is designed for the specific site conditions, design, layout and placement practices. This often leads to signing variations. However, uniformity of design principles and practices is desired. This Manual will provide this uniformity.

The primary objectives of this Manual are to:

- Provide Department staff and design consultants with information that will improve consistency and effectiveness of highway signing design; and
- Reference additional applicable design policies; and
- Address sign designs that are not covered in the MUTCD or other Department policies or documents.

1.B. STATUS OF MANUAL

This Manual presents information as guidance for use by design personnel and is based on the standards, specifications, or regulations otherwise established by the Department and the Utah Transportation Commission.

The Department will update this manual periodically to reflect modifications and changes related to sign design principles and practices.

1.C. APPLICATION OF MANUAL GUIDELINES

This Manual is intended to assist in and provide guidance for the design and use of highway signing but it does not establish criteria or warrants for the use of any sign shown in the Manual.

1.D. MANUAL CONTENT

This Manual describes various aspects of highway signing, with an emphasis on general sign design principles and standards.

Part 1 describes the purposes and functions of the Manual, its relationship to other highway sign documents and general policies and procedures that apply to the design of highway signs.

Parts 2 through 7 serve as a quick reference to key principles of sign design and use as found in the MUTCD. It highlights principles from the MUTCD that are frequently misunderstood or misapplied. It also emphasizes Department-specific applications.

The Utah Standard Highway Signs Supplement (USHSS) contains layouts of the various sign designs unique to Utah. Each layout provides information related to sign sizes, colors, and legend.

1.E. RELATIONSHIP TO OTHER DOCUMENTS

1.E.1 References to other Documents

This Manual combines information contained in numerous other documents to assist in the design of highway signing. Where appropriate, information from other documents is repeated in this Manual with appropriate citations to the source of the information. In other cases, this Manual refers the user to a specific document for guidance on sign design issues.

The following documents are cited in this manual and contain additional information related to the application, design, placement, installation, and maintenance of highway signing.

1.E.1.a *Utah MUTCD*

The Utah MUTCD establishes practices for the selection, design, and placement of traffic control devices. The Utah MUTCD has been adopted in Utah Administrative Code R920-1.

The National MUTCD will be referred as the National MUTCD. The MUTCD establishes the legal minimum requirements for the selection, application, design, installation, and maintenance of traffic control devices.

Much of the text and figures in this Manual contain cross-references to the MUTCD which identify the need or application of specific signing. The user should refer to the indicated references of the MUTCD to determine the appropriate application of or need for the sign when a figure contains a cross-reference to the MUTCD. The official and most current version of the MUTCD is available on-line at www.udot.utah.gov.

1 E.1.b *UDOT 06C and 07 Policies*

The 06C and 07 Policies contain additional guidance related to the design, placement, and mounting of highway guide signs. Where appropriate, sections and figures in this Manual reference these policies.

See the UDOT website at www.udot.utah.gov for the Department's policies.

Table 1-1 presents a list of specific Department Policies that are pertinent to highway signing:

Table 1-1 UDOT Policies Related to Highway Signing

Number	Policy Name
06C-03	Street Name Signs
06C-06	Highway Lighting
06C-10	Policy for Roadside Memorials
06C-11	Airport Trailblazing Signing
06C-12	Use of Off-Highway Vehicles within State Highway Rights-of-Way
06C-13	City / Municipal Boundary Signing
06C-14	Logo Signing on Freeways
06C-21	Sign Management System
06C-23	Use of Variable Message Signs (VMS)
06C-24	Engine Brake Restriction Signing
06C-30	Recreational and Cultural Interest Signing, Guide Signing For Recreational Information Centers, and Camping Signs on Highways Other than Freeways
06C-31	Supplemental, General Service and No Services Signing On Freeways
06C-32	Off-Interstate Business Loops and Spurs
06C-33	Distance Signs on the Interstate System
06C-34	Signing of Rest Areas, Rest Stops, and Tourist Information Centers
06C-37	Placement of Monument or Gateway Features on State Highways
06C-63	Share the Road Signs
07-20	Highway Linear Referencing

1.E.1.c *Standard Highway Signs and Markings (SHSM) book*

The Federal Highway Administration's Standard Highway Signs and Markings (SHSM) book presents detailed drawings of the Standard Highway Signs prescribed in the National

MUTCD. The SHSM book shall be used to determine the design and layout of standard signs. The SHSM book is available on-line at: mutcd.fhwa.dot.gov/ser-shs_millennium.htm.

1.E.1.d *Utah Standard Highway Signs Supplement (USHSS).*

Most of the general highway sign design guidelines are included in the MUTCD. The USHSS contains layouts of the various sign designs unique to Utah. Each layout provides information related to sign sizes and other design details. If there is a sign in the USHSS that replaces a sign in the SHSM book, the USHSS sign should be used.

1.E.2 Precedence over Other Documents

In some cases, the information presented in this Manual exceeds what is presented in the MUTCD or other Department documents. In such cases this manual takes precedence.

When the MUTCD exceeds the requirements of this Manual, the MUTCD takes precedence.

In situations where there are conflicts between other Department documents and this Manual, this Manual takes precedence.

1.F. APPROVAL AUTHORITY AND PROCESS

UDOT Policy 06C-21 – Sign Management System outlines the Department's program to ensure that all sign installations on the Utah State Highway System conform to the current edition of MUTCD and any applicable standard drawings. Approval authority resides partly with the Region Traffic Engineer and partly with the Traffic and Safety Division.

The policy states:

“All new and replacement permanent sign installations on the Utah State Highway System shall be reviewed and approved by the Region Traffic Engineer or their designee, except; all new and replacement permanent sign installations on freeways, grade separated expressways and parkways, and other facilities which are constructed to freeway standards shall be reviewed and approved by the Traffic and Safety Division for message, location, and design layout.”

1.G. PLANS FOR SIGNING

Conceptual plans should be discussed and coordinated within the Department during the earliest stages of preliminary design, with additional details being submitted for review as the design develops. Sign designs and locations should be completed and submitted during the plan-in-hand stage.

Part 2. GENERAL DESIGN PRINCIPLES

2.A. FUNCTION AND PURPOSE OF SIGNS¹

Because the requirements and standards for signs depend on the particular type of highway upon which they are to be used the following definitions shall apply:

- Freeway - a divided highway with full control of access or other facilities that are constructed to freeway standards.
- Expressway - a divided highway with partial control of access.
- Conventional Road - a street or highway other than a low-volume road, a freeway, or an expressway².
- A Low-Volume Road shall be defined as follows:
 - A low-volume road shall be a facility lying outside of built-up areas of cities, towns, and communities, and it shall have a traffic volume of less than 400 AADT.
 - A low-volume road shall not be a freeway, an expressway, an interchange ramp, a freeway service road, a road on a designated State highway system, or a residential street in a neighborhood. In terms of highway classification, it shall be a variation of a conventional road or a special purpose road. A low-volume road shall be classified as either paved or unpaved³.
- Parkways shall be signed according to the above definitions based on their classifications.

2.B. STANDARDIZATION OF APPLICATION⁴

Signs should be used only where justified by engineering judgment or studies⁵.

Results from traffic engineering studies of physical and traffic factors should indicate the locations where signs are deemed necessary or desirable.

Roadway geometric design and sign application should be coordinated so that signing can be effectively placed to give the road user any necessary regulatory, warning, guidance, and other information.

Each standard sign shall be displayed only for the specific purpose as prescribed in the MUTCD or this Manual.

Determination of the particular signs to be applied to a specific condition shall be made in accordance with the provisions set forth in [MUTCD Part 2](#).

¹ See [MUTCD Section 2A.01](#)

² See [MUTCD Section 1A.13](#)

³ See [MUTCD Section 5A.01](#)

⁴ See [MUTCD Section 2A.03](#)

⁵ See [MUTCD Section 1A.09](#)

Before any new highway, private road open to public travel (see definition in MUTCD [Section 1A.13](#)), detour, or temporary route is opened to public travel; all necessary signs shall be in place.

Signs required by road conditions or restrictions shall be removed when those conditions cease to exist or the restrictions are withdrawn.

2.C. EXCESSIVE USE OF SIGNS⁶

Regulatory and warning signs should be used conservatively because these signs, if used to excess, tend to lose their effectiveness.

If used, route signs and directional guide signs should be used frequently because their use promotes efficient operations by keeping road users informed of their location.

2.D. CLASSIFICATION OF SIGNS⁷

Signs shall be defined by their function as follows:

- Regulatory Signs give notice of traffic laws or regulations.
- Warning Signs give notice of a situation that might not be readily apparent
- Guide Signs show route designations, destinations, directions, distances, services, points of interest, and other geographical, recreational, or cultural information.

2.E. DESIGN OF SIGNS⁸

In the specifications for individual signs and object markers, the general appearance of the legend, color, and size are shown in the accompanying tables and illustrations, and are not always detailed in the text.

Detailed drawings of standard signs, object markers, alphabets, symbols, and arrows are shown in the USHSS and the SHSM book. Detailed drawings of specific signs to Utah are shown in the USHSS.

The basic requirements of a sign are that it be legible to those for whom it is intended and that it be understandable in time to permit a proper response. Desirable attributes include:

- High visibility by day and night.
- High legibility (adequately sized letters, symbols, or arrows, and a short legend for quick comprehension by a road user approaching a sign).

Standardized colors and shapes are specified so that the several classes of traffic signs can be promptly recognized. Simplicity and uniformity in design, position, and application are important.

The term legend shall include all word messages and symbol and arrow designs that are intended to convey specific meanings.

⁶ See [MUTCD Section 2A.04](#)

⁷ See [MUTCD Section 2A.05](#)

⁸ See [MUTCD Section 2A.06](#)

Uniformity in design shall include shape, color, dimensions, legends, borders, and illumination or retroreflectivity.

Standardization of these designs does not preclude further improvement by minor changes in the proportion or orientation of symbols, width of borders, or layout of word messages, but all shapes and colors shall be as indicated in the MUTCD, USHSS, SHSM book, and this Manual.

All symbols shall be unmistakably similar to, or mirror images of, the adopted symbol signs, all of which are shown in the USHSS or the SHSM book. Symbols and colors shall not be modified. All symbols and colors for signs not shown in the USHSS or the SHSM book shall follow the procedures for experimentation and change described in MUTCD [Section 1A.10](#).

Although the standard design of symbol signs cannot be modified, the orientation of the symbol may be changed to better reflect the direction of travel, if appropriate.

Where a standard word message is applicable, the wording shall be as provided in this Manual. In situations where word messages other than those provided in this Manual are required, the signs shall be of the same shape and color as standard signs of the same functional type are required.

Phone numbers, internet addresses and e-mail addresses, including domain names and uniform resource locators (URL) shall not be displayed on any sign, supplemental plaque, sign panel (including logo sign panels on specific service signs), or changeable message sign, except:

- Carpool Information (D12-2) signs.
- Phone numbers on the End Road Work Information (GS20-2a series) and Project Notification (DS18 series) signs,
- Internet addresses, e-mail addresses, or telephone numbers may be displayed on signs, supplemental plaques, sign panels, and changeable message signs that are intended for viewing only by pedestrians, bicyclists, occupants of parked vehicles, or drivers of vehicles on low-speed roadways where engineering judgment indicates that an area is available for drivers to stop out of the traffic flow to read the message.
- An internet domain name (e.g. '.com') may be used in the sponsor's acknowledgement logo if it is part of the sponsor's official registered business name (e.g. 'Overstock.com').

Pictographs (a pictorial representation used to identify a governmental jurisdiction⁹) shall not be displayed on signs except as specifically provided in the MUTCD. Pictographs shall be simple, dignified, and devoid of any advertising. When used to represent a political jurisdiction (such as a State, county, or municipal corporation) the pictograph shall be the official designation adopted by the jurisdiction. When used to represent a college or university, the pictograph shall be the official seal adopted by the institution. Pictorial representations of university or college programs shall not be permitted to be displayed on a sign.

⁹ See [MUTCD Section 1A.13](#)

Pictographs shall be restricted to the following signs:

- Street Name (DS3-3 and DS3-4) series signs.
- Community Wayfinding (see Section 2D.50) signs.
- Acknowledgment (DS14-1 and DS14-2) signs.
- Political Boundary (see Section 2H.02 and UDOT Policy 06C-13) signs.
- Otherwise permitted in MUTCD.

2.F. RETROREFLECTIVITY AND ILLUMINATION¹⁰

Regulatory, warning, and guide signs and object markers shall be retroreflective or illuminated to show the same shape and similar color by both day and night, unless otherwise provided in the text discussion of the MUTCD for a particular sign or group of signs.

Letters, numerals, symbols, and borders of all guide signs shall be retroreflective and all backgrounds shall be retroreflective or illuminated.

Illumination of signs shall be per UDOT Policy 06C-06, Highway Lighting. The type of illumination chosen should provide effective and reasonably uniform illumination of the sign face and message. The requirements for sign illumination shall not be considered to be satisfied by street or highway lighting. Where there is no serious interference from extraneous light sources, retroreflectorized ground-mounted signs usually provide adequate nighttime visibility.

2.G. SIGN SHAPES¹¹ AND COLORS¹²

Particular shapes, as shown in [MUTCD Table 2A-4](#), shall be used exclusively for specific signs or series of signs, unless otherwise provided in this Manual or in the MUTCD for a particular sign or class of signs.

The colors to be used on standard signs and their specific use on these signs shall be as provided in the applicable sections of the MUTCD. Common uses of sign colors are shown in [MUTCD Table 2A-5](#).

Color schemes on specific signs are shown in the illustrations located in each appropriate Chapter of the MUTCD. Information regarding color coding of destinations on guide signs, including Community Wayfinding signs, is contained in [MUTCD Chapter 2D](#). The colors coral, and light blue are being reserved for uses that will be determined in the future by the Federal Highway Administration.

In the MUTCD the color fluorescent yellow-green is reserved for school signing. It cannot be used for any other application, including pedestrian and bicycle signs (See MUTCD Section 7B.07).

Fluorescent yellow and fluorescent orange shall be used on state highways for the corresponding standard colors.

¹⁰ See [MUTCD Section 2A.07](#), [2D.03](#), [2E.06](#)

¹¹ See [MUTCD Section 2A.09](#)

¹² See [MUTCD Section 2A.10](#) and [2E.05](#)

Whenever white is specified in the MUTCD in the USHSS or in the SHSM book as a color, it is understood to include silver-colored retroreflective coatings or elements that reflect white light.

The approved fluorescent version of the standard red or green color may be used as an alternative to the corresponding standard color.

Guide signs, except as shown in the MUTCD and herein noted, shall have white letters, symbols, and borders on a green background.

Color requirements for route signs and trailblazers, signs with blank-out or changeable messages, signs for services, rest areas, park and recreational areas, and for certain miscellaneous signs are specified in individual sections of the MUTCD dealing with the particular sign or sign group.

Except where otherwise provided in the MUTCD, different color sign backgrounds shall not be used to provide color coding of destinations. The color coding shall be accomplished by the use of different colored square or rectangular panels on the face of the guide signs.

The different colored panels may include a black or white (whichever provides the better contrast with the panel color) letter, numeral, or other appropriate designation to identify an airport terminal or other destination.

Examples of two color-coded sign assemblies are shown in [MUTCD Figure 2D-1](#).

2.H. DIMENSIONS¹³

The prescribed sign dimensions in the MUTCD, the USHSS, the SHSM book, and this Manual shall be used unless engineering judgment determines that other sizes are appropriate.

The sizes shown in the Minimum columns that are smaller than the sizes shown in the Conventional Road columns in the various sign size tables in the MUTCD shall only be used on low speed roadways, alleys, and private roads open to public travel where the reduced legend size would be adequate for the regulation or warning or where physical conditions preclude the use of larger sizes.

It may be necessary to use sign sizes that are smaller or larger than prescribed sizes due to conditions such as severe roadway geometrics or pre-existing conditions that preclude meeting sign size requirements

When the use of freeway signs that are smaller or larger than the prescribed size is requested, these signs are subject to an approval process by the UDOT Traffic Safety Operations Engineer.

When the use of conventional signs that are smaller or larger than the prescribed size is requested, these signs are subject to an approval process by the Region Traffic Engineer.

When sizes of signs are different than the prescribed dimensions, standard proportions (e.g. letter height, interline and edge spacing) shall be retained as much as practical.

Signs larger than the prescribed sizes should be used where greater legibility or emphasis is needed.

¹³ See [MUTCD Section 2A.11](#)

The overall sign dimensions should be increased or decreased in 6 inch increments except for standard sizes defined in the MUTCD.

When supplemental plaques are installed with larger sized signs, a corresponding increase in the size of the plaque and its legend should also be made. The resulting plaque size should be approximately in the same relative proportion to the larger-sized sign as the conventional-sized plaque is to the conventional-sized sign.

2.I. SYMBOLS¹⁴

Symbol designs shall in all cases be unmistakably similar to those shown in the MUTCD and in the SHSM book.

A symbol used for a given category of signs (regulatory, warning, or guide) shall not be used for a different category of signs, except as specifically authorized in the MUTCD (i.e. a recreational and cultural interest area symbol¹⁵ shall not be used on any regulatory or warning sign on any street, road, or highway).

Balance guide sign legend components for maximum legibility of the symbol with the rest of the sign.

New warning or regulatory symbol signs not readily recognizable by the public should be accompanied by an educational plaque. Educational plaques may be left in place as long as they are in serviceable condition.

2.J. WORD MESSAGES¹⁶

All word messages shall use standard wording and letters as shown in the MUTCD and in the SHSM book

Word messages should be as brief as possible and the lettering should be large enough to provide the necessary legibility distance. A minimum specific ratio of 1 inch of letter height per 30 feet of legibility distance should be used.

Abbreviations (see MUTCD Section 1A.15) should be kept to a minimum and should include only those that are commonly recognized and understood.

Abbreviations of proper names should not be used.

Word messages should not contain periods, apostrophes, question marks, ampersands, or other punctuation or characters that are not letters, numerals, or hyphens, unless necessary to avoid confusion.

The solidus (slanted line or forward slash) is intended to be used for fractions only and should not be used to separate words on the same line of legend. Instead, a hyphen should be used for this purpose, such as "TRUCKS - BUSES."

Fractions shall be displayed with the numerator and denominator diagonally arranged about the solidus (slanted line or forward slash). The overall height of the fraction is measured from the top of the numerator to the bottom of the denominator, each of which is vertically aligned with the upper and lower ends of the solidus. The overall height of the fraction shall

¹⁴ See [MUTCD Section 2A.12](#), and [2E.18](#)

¹⁵ See [MUTCD Chapter 2M](#)

¹⁶ See [MUTCD Section 2A.13](#)

be determined by the height of the numerals within the fraction, and shall be 1.5 times the height of an individual numeral within the fraction.

The SHSM book contains details regarding the layouts of fractions on signs.

When initials are used to represent an abbreviation for separate words (such as “U S” for a United States numbered route), the initials should be separated by a space of between 1/2 and 3/4 of the letter height of the initials. A hyphen should not be used between the route abbreviation and number for United State and State routes such as US 6 and SR 201.

When an Interstate route is displayed in text form instead of using the route shield, a hyphen should be used for clarity, such as “I-15.”

2.K. SIGN BORDERS¹⁷

Each sign illustrated in this Manual, the USHSS, the SHSM book and in the MUTCD shall have a border at or just inside the edge, unless otherwise provided.

Signs shall have a border of the same color as the legend in order to outline their distinctive shape and thereby give them easy recognition and a finished appearance.

Signs with a dark border on a light background should be indented from the edge. Signs with a light border on a dark background should extend to the edge of the sign.

The width of the border and the radius of the border corners shall be sized to give signs a uniform appearance and maintain proper proportionality. Values given in Table 2-1 should be used initially with minor adjustments being made if necessary to achieve visual balanced. When using Table 2-1, the smaller sign dimension should govern.

Generally, the border width should not exceed the stroke width of the major lettering of the sign (see Table 2-2).

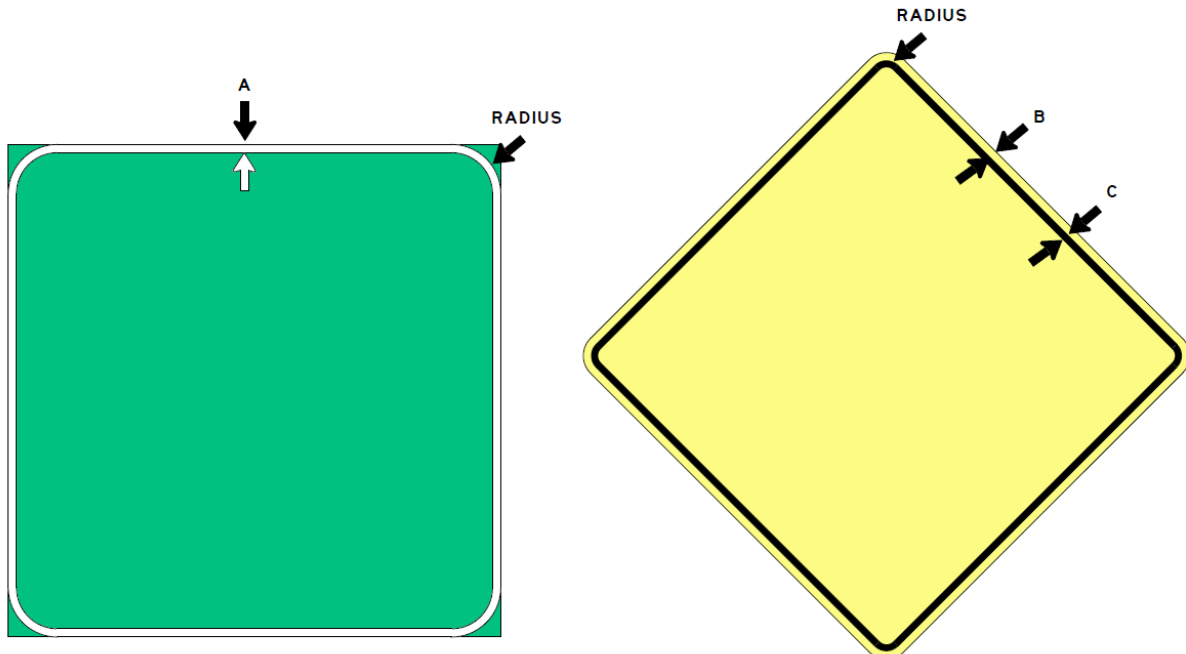
For guide signs, the border radii should be one eighth of the smaller sign dimension rounded (usually down) to the nearest 3 inch increment (6, 9 or 12) up to a maximum of 12 inches.

The corners of signs shall not be rounded to a radius that is concentric with that of the border.

The corners of the sign should be clipped for safety.

¹⁷ See [MUTCD Section 2A.14](#), and [2E.16](#)

Table 2-1 Border Width and Corner Radius Dimensions



SIGN SIZE*	BORDER WIDTH			RADIUS
	A Light Border	B Indent	C Dark Border	
Inch				Inch
Standard Signs (regulatory, warning, street names, trail blazing, etc)				
9	.375	.375	.375	1
12	.375	.375	.438	1.5
18-24	.5	.375	.625	1.5
30	.75	.5	.75	1.88
36-42	.75	.625	.875	2.25
48-66	1	.75	1.25	3
72 +	1	.75	1.25	3
Guide Signs				
Up to 66**	1.25	-	-	6
72-90	1.5, 1.75 or 2 (max) not to exceed stroke width of the major lettering (see Table 2-2)			9
96-180				12
186 +	3	-	-	12
plaques and exit tabs	match adjacent sign			6

* The sign's smaller dimension governs

** May use dimensions for standard signs for better visual balance

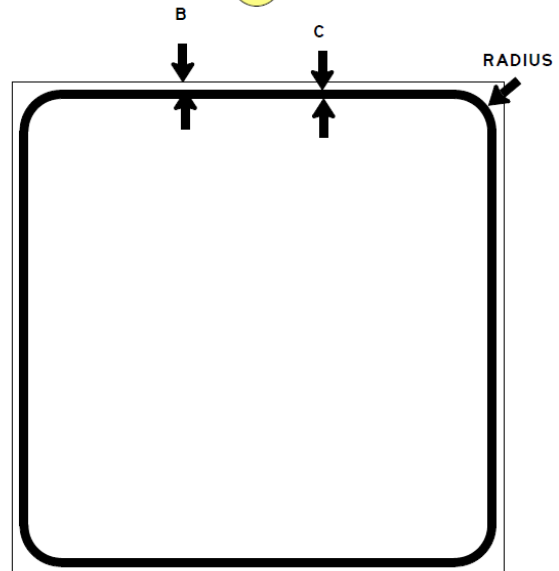


Table 2-2 Stroke Width of Different Heights and Fonts

		Font Size				
		B	C	D	E	E-Mod
Letter Height (inches)	4	0.52	0.56	0.64	0.72	0.80
	5	0.65	0.70	0.80	0.90	1.00
	6	0.78	0.84	0.96	1.08	1.20
	7	0.91	0.98	1.12	1.26	1.40
	8	1.04	1.12	1.28	1.44	1.60
	9	1.17	1.26	1.44	1.62	1.80
	10	1.30	1.40	1.60	1.80	2.00
	10.67	1.39	1.49	1.71	1.92	2.13
	12	1.56	1.68	1.92	2.16	2.40
	13.33	1.73	1.87	2.13	2.40	2.67
	15	1.95	2.10	2.40	2.70	3.00
	16	2.08	2.24	2.56	2.88	3.20
	20	2.60	2.80	3.20	3.60	4.00

*Example: On a minor interchange the Advance Guide sign is 174 x 72 inches. The major legend is 13.33 inch E-Modified font. The border width cannot exceed the stroke width of the font which is 2.67 inches. It also cannot exceed the 2 inch maximum for that size sign. Therefore, the border width would be chosen at 2 inches. The border radii would be chosen at 9 inches. The border on the exit plaque above the sign would be the same thickness with a corner radius of 6 inches.

PART 3. REGULATORY SIGNS

Most regulatory signs have standardized designs that conform to the MUTCD and are contained in the Standard Highway Signs and Markings (SHSM) book. Sizes for standard regulatory signs are provided in MUTCD Section 2B.03 and Table 2B-1 and vary by roadway type.

An oversized sign may be used for special applications where speed, volume, or other factors result in conditions where increased legibility is desirable.

Regulatory signs specific to the Department are found in the Utah Standard Highway Signs Supplement (USHSS).

PART 4. WARNING SIGNS¹⁸

Most warning signs have standardized designs that conform to the MUTCD and are contained in the Utah Standard Highway Signs Supplement (USHSS) and Standard Highway Signs and Markings (SHSM) book.

Except as provided in the next paragraph or unless specifically designated otherwise in the MUTCD, USHSS or this Manual, all warning signs shall be diamond-shaped (square with one diagonal vertical) with a black legend and border on a fluorescent yellow (required on state routes) or yellow background except that the background shall be fluorescent yellow-green when associated with school signing (See MUTCD Section 7B.07)

A warning sign that is larger than the size shown in the Oversized column in MUTCD Table 2C-2 for that particular sign may be diamond-shaped or may be rectangular or square in shape.

Warning signs serve a variety of conditions and purposes and sign dimensions should reflect the appropriate level of speed, volume, visibility, emphasis and recognition.

Sizes for standard warning signs are provided in [MUTCD Section 2C.04](#) and [Table 2C-2](#) and vary by roadway type. Sizes and designs of warning signs specific to the Department are found in the USHSS.

4. A. SHARE THE ROAD PLAQUES (W16-1P,WS16-1aP)¹⁹

Except as provided in the next paragraph, in situations where there is a need to warn drivers to watch for bicycles traveling along the highway and a Share the Road plaque is used with a Bicycle (W11-1) sign, the MOTORISTS GIVE 3 FEET (WS16-1aP) plaque (see Figure 4-1) shall be used.

In situations where there is a need to warn drivers to watch for other slower forms of transportation traveling along the Highway, such as bicycles, golf carts, horse-drawn vehicles, or farm machinery, a SHARE THE ROAD (W16-1P) plaque (see Figure 2C-12) may be used.

A WS16-1aP or W16-1P plaque shall not be used alone. If a WS16-1aP plaque is used, it shall be mounted below a Bicycle sign (W11-1, see Section 2C.49). If a W16-1P plaque is used, it shall be mounted below either a Vehicular Traffic Warning sign (see MUTCD Section 2C.49) or a Non-Vehicular Warning sign (see MUTCD Section 2C.50). The background color of the WS16-1aP or W16-1P plaque shall match the background color of the warning sign with which it is displayed.

Figure 4-1 Share the Road Plaques



¹⁸ See [MUTCD Chapter 2C](#)

¹⁹ See [MUTCD Section 2C.67](#)

4. B. OPEN RANGE PLAQUES (WS16-19P, WS16-19aP)²⁰

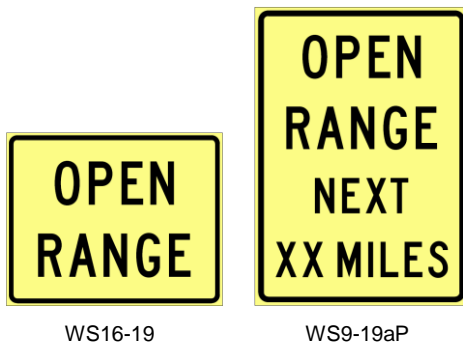
In situations where there is a need to warn drivers to watch for cattle that can be present in an uncontrolled manner along the highway, the Open Range (WS16-19P, WS16-19aP) plaques (see Figure 4-2) should be used as a supplement to the Cow (W11-4) sign.

An Open Range (WS16-19P series) plaque shall not be used alone. If an Open Range plaque is used, it shall be mounted below the Cow (W11-4) sign. The background color of the Open Range plaque shall match the background color of the warning sign with which it is displayed.

A NEXT X MILES (WS16-4P series) plaque (see MUTCD Figure 2C-4) may be mounted below the OPEN RANGE (WS16-19P) plaque.

The NEXT X MILES (WS16-4P series) or the OPEN RANGE NEXT XX MILES (WS16-19aP) plaques should decrease in 5 mile increments.

Figure 4-2 Open Range Plaques



Part 5. GUIDE SIGNS

Guide signs are essential to direct road users along streets and highways, to inform them of intersecting routes, and to direct them to cities, towns, or other important destinations. They also identify features such as rivers and streams, parks, forests, points of interest, and historical sites, and generally to give such information as will help road users along their way in the most simple, direct manner possible.

Information related to the design of guide signs is divided into two groups:

1. Conventional Roads²¹, and;
2. Freeways and Expressways²²

The requirements and specifications for expressway signing exceed those for conventional roads, but are less than those for freeway signing.

Guide sign sizes and designs specific to the Department are found in the USHSS.

²⁰ See [MUTCD Section 2C.62a](#)

²¹ See [MUTCD Chapter 2D](#)

²² See [MUTCD Chapter 2E](#)

5.A. GENERAL

5.A.1. Sign Dimension²³

Except as provided in MUTCD Chapters 2D thru 2N, guide sign legends are so variable that a standardized size is not feasible. Sign size is determined primarily by:

- Length of the message.
- Size of lettering and spacing necessary for proper legibility.

Reduced spacing between the letters or words on a line of legend should not be used as a means of reducing the overall size of a guide sign, except where the Department determines it to be necessary to meet unusual lateral space constraints. In such cases, the legibility distance of the sign legend should be the primary consideration in determining whether to reduce the spacing between the letters or the words or between the words and the sign border.

In all cases, the overall sign dimensions should be increased or decreased in 6 inch increments.

With all freeway and expressway signs, the message dimensions shall be determined first and the outside sign dimensions secondarily. Sign size is determined primarily in terms of the length of the message and the size of the lettering necessary for proper legibility.

5.A.2. Size and Style of Lettering and Signs²⁴

On conventional roads, the principal legend on guide signs shall be in letters and numerals at least 6 inches in height for all upper case letters, or a combination of 6 inches in height for upper-case letters and 4.5 inch in height for lower-case letters.

The lettering for names of places, streets, and highways on conventional road guide signs shall be a combination of lower-case letters with initial upper-case letters (see Section 2.J). The nominal loop height of the lower-case letters shall be 3/4 the height of the initial upper-case letter (Most sign layout software automatically reduces the size of lowercase letters to 3/4 the height of the corresponding uppercase letters). When a mixed-case legend letter height is specified referring only to the initial upper-case letter, the height of the lower-case letters that follow shall be determined by this proportion. When the height of a lower-case letter is referenced, the reference is made to the nominal loop height and the height of the initial upper-case letter shall also be determined by this proportion. All other word legends shall be uppercase letters.

On urban streets with speeds of 25 mph or less, the principal legend shall be in letters at least 4 inches in height for all upper-case letters, or a combination of 4 inches in height for upper-case letters and 3 inches in height for lower-case letters.

Legibility for signs should be a minimum ratio of 1 inch of letter height for every 30 feet of desired legibility.

²³ See [MUTCD Section 2D.04](#) and [2E.14](#)

²⁴ See [MUTCD Section 2E.14](#) , [2D.04](#) and 2D.05

Minimum numeral and letter sizes for expressway guide signs according to interchange classification (see Section 5.C.13), type of sign, and component of sign legend are shown in [MUTCD Tables 2E-1, 2E-2, and 2E-3](#)

Minimum numeral and letter sizes for freeway guide signs, according to interchange classification, and type of sign appear in MUTCD [Tables 2E-1, 2E-4 and 2E-5](#) .

Freeway lettering sizes should be used when expressway geometric design is comparable to freeway standards.

The type face (font) for all letters and the numerals used on signs shall be as shown in the SHSM book or this Manual. Designs for upper-case, lower-case, and capital alphabets together with tables of recommended letter spacing, are shown in the SHSM book.

A sign mounted over a particular roadway lane to which it applies might have to be limited in horizontal dimension to the width of the lane, so that another sign can be placed over an adjacent lane. The necessity to maintain proper vertical clearance might also place a further limitation on the size of the overhead sign and the legend that can be accommodated.

5.A.3. Amount of Legend²⁵

Guide signs on Conventional Roads should be limited to three lines of principal legend that include only place names, route numbers, and street names. A city name and street name shall not be used on the same sign.

No more than two destination names or one street name shall be displayed on any Interstate System Advance Guide sign or Exit Direction sign. A city name and street name shall not be used on the same sign.

An exit or destination should not be designated as “Ranch”. Where these exist, they should be changed to reflect the correct destination. Often the name of the intersecting road can be used. Check with the local UDOT maintenance shed and the Travel council to establish the proper destination name.

Distance Signs on the Interstate System shall contain two or three destinations. All three destinations should be used whenever practical.

For Supplemental Guide signs, up to three destination or street names may be used.

Sign legends should not exceed three lines exclusive of the exit number and action or distance information.

Sign legends may include symbols, route numbers, arrows, cardinal directions, and exit instructions.

Pictographs (see Section 2.E) shall not be displayed on supplemental signs.

5.A.4. Interline and Edge Spacing²⁶

Design layouts for standard road signs showing interline spacing, edge spacing, and other specification details shall be as shown in the SHSM book and the USHSS.

²⁵ See [MUTCD Sections 2D.07](#) and [2E.10](#)

²⁶ See [MUTCD Sections 2D.06](#) and [2E.15](#)

Interline spacing of upper-case letters should be approximately three-fourths the average of upper-case letter heights in adjacent lines of letters. The spacing to the top and bottom borders should be equal to the average of the letter height of the adjacent line of letters. The lateral spacing to the vertical borders should be essentially the same as the height of the largest letter.

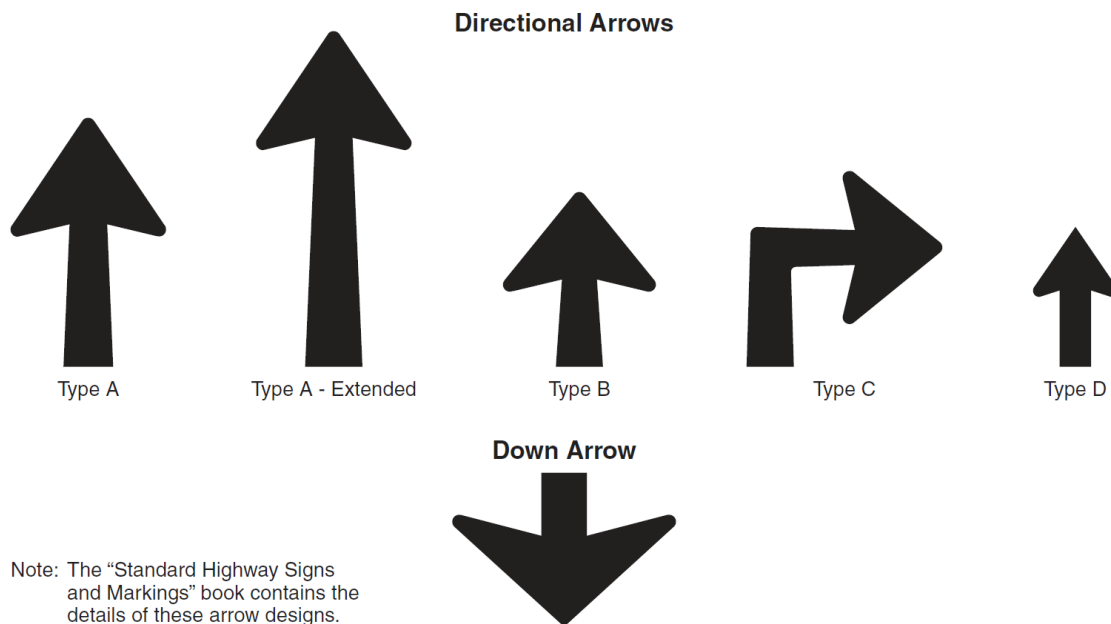
5.A.5. Use of Arrows²⁷

Arrows are used for lane assignment and to indicate the direction toward designated routes or destinations.

Figure 5-1 shows the various standard arrow designs that have been approved for use on guide signs. Detailed drawings and standardized sizes based on ranges of letter heights are shown for these arrows in the SHMS book.

On overhead signs where it is desirable to indicate a lane to be followed, a down arrow shall be positioned approximately over the center of the lane and shall point vertically downward toward the approximate center of that lane. Down arrows shall be used only on overhead guide signs that restrict the use of specific lanes to traffic bound for the destination(s) and/or route(s) indicated by these arrows. Down arrows shall not be used unless an arrow can be located over and pointed to the approximate center of each lane that can be used to reach the destination displayed on the sign.

Figure 5-1 Arrows for Use on Guide Signs



If down arrows are used, having more than one down arrow pointing to the same lane on a single overhead sign (or on multiple signs on the same overhead sign structure) shall not be permitted.

²⁷ See [MUTCD Sections 2D.08](#)

Where a roadway is leaving the through lanes, a directional arrow shall point upward at an angle that approximates the alignment of the exit roadway.

Curved-stem arrows (see MUTCD Figure 2D-8) that represent the intended driver paths to destinations involving left-turn movements may be used on guide signs on approaches to circular intersections.

Curved-stem arrows shall not be used on any sign that is not associated with a circular intersection.

If curved-stem arrows are used, the principles set forth in MUTCD Sections 2D.26 through 2D.29 should be followed.

The Type A directional arrow should be used on guide signs on freeways, expressways, and conventional roads to indicate the direction to a specific destination or group of destinations, except as otherwise provided in this Section and in Section 5.A.6.

When a directional arrow in a vertical, upward-pointing orientation is placed to the side of a group of destinations to indicate a through movement, the Type A directional arrow should be used. When a directional arrow in a vertical, upward-pointing orientation is placed to the side of a single destination or under a destination or group of destinations, the Type B directional arrow should be used.

The Type B directional arrow should be used on guide signs on conventional roads when placed at any angle to the side of a single destination or when placed in a horizontal orientation to the side of a group of destinations.

The Type C advance turn directional arrow should be used on conventional road guide signs placed in advance of an intersection where a turn must be made to reach a posted destination or group of destinations.

The Type D directional arrow should be used primarily for sign applications other than guide signs, except for post-mounted guide signs as outlined below.

The Type A extended directional arrow may be used on guide signs where additional emphasis regarding the direction is needed relative to the amount of legend on the sign.

The Type C directional arrow may be used to the side of the legend of an overhead guide sign to accentuate a sharp turn exit maneuver from a mainline roadway (see Section 5.C.17 for additional information regarding Exit Direction signs for low advisory ramp speeds).

On conventional roads on the approach to an intersection where the Combination Lane-Use/Destination overhead guide sign (see Section 5.B.19) is not used, the Type C advance turn directional arrow may be used beneath the legend of an overhead guide sign to indicate the fact that a turn must be made from a mandatory movement lane over which the sign is placed to reach the destination or destinations displayed on the sign.

The Type D directional arrow may be used on post-mounted guide signs on conventional roads with lower operating speeds if the height of the text on the sign is 8 inches or less.

The directional and down arrows are shown in Figure 5-1 may be used on signs other than guide signs for the purposes of providing directional guidance and lane assignment.

Arrows used on guide signs to indicate the directions toward designated routes or destinations should be pointed at the appropriate angle to clearly convey the direction to be taken. A horizontally-oriented directional arrow design should be used at right-angle intersections.

On a post-mounted guide sign, a directional arrow for a straight-through movement should point upward. Except as provided in MUTCD Section 2D.46, for an entrance ramp, the arrow on a guide sign should point horizontally or at an upward angle that approximates the sharpness of the turn.

At an exit, an arrow shall be placed at the side of the sign that will reinforce the movement of exiting traffic. The directional arrow design should be used.

Arrows may be placed below the principal sign legend or on the appropriate side of the legend.

On a post-mounted sign at an exit where placement of the arrow to the side of the legend farthest from the roadway would create an unusually wide sign that limits the road user's view of the arrow, the directional arrow may be placed at the bottom portion of the sign, centered under the legend.

The width across the arrowhead for the Types A, B, and C directional arrows should be between 1.5 and 1.75 times the height of the upper-case letters of the principal legend on the sign. The width across the arrowhead for the Type D directional arrow should be at least equal to the height of the upper-case letters of the principal legend on the sign. For down arrows used on overhead signs, the width across the arrowhead should be approximately two times the height of the upper-case letters of the principal legend on the sign.

Arrows used in Overhead Arrow-per-Lane and Diagrammatic guide signing, if used on conventional roads, except for signs on approaches to roundabouts, should follow the principles set forth in Section 5.A.6. Arrows used in Diagrammatic guide signing on approaches to roundabouts should follow the principles set forth in MUTCD Section 2D.38.

The SHSM book contains design details and standardized sizes of the various arrows based on ranges of letter heights of principal legends.

5.A.6. Use of Arrows for Interchange Guide Signs²⁸

Arrows used on interchange guide signs shall be of the types shown in Figure 5-1 and shall comply with the provisions of this Section and Section 5.A.5.

Except on Overhead Arrow-per-Lane guide signs (see Section 5.C.5) and on Exit Direction signs for lane drops (see Section 5.C.7), and except as provided in the following paragraphs below, directional arrows on all overhead and post-mounted Exit Direction signs shall point diagonally upward and shall be located on the side of the sign consistent with the direction of the exiting movement.

On post-mounted Exit Direction signs that are located where a directional arrow to the side of the legend farthest from the roadway might create an unusually wide sign that limits the road user's view of the arrow, the directional arrow may be placed at the bottom portion of the sign, centered under the legend.

Directional arrows on guide signs for multi-lane exits shall be positioned below the legend approximately over the center of each lane to which the arrow applies (see Figure 5-10).

On overhead signs where down arrows are used to indicate a lane to be followed, a down arrow shall be positioned approximately over the center of each lane and shall point vertically downward toward the use of specific lanes to traffic bound for the destination(s)

²⁸ See [MUTCD Section 2E.19](#)

and/or route(s) indicated by these arrows. Down arrows shall not be used unless an arrow can be located over and pointed to the approximate center of each lane that can be used to reach the destination displayed on the sign.

If down arrows are used, having more than one down arrow pointing to the same lane on a single overhead sign (or on multiple signs on the same overhead sign structure) shall not be permitted.

Directional and down arrows for use on guide signs are shown in Figure 5-1. Detailed drawings and standardized sizes based on ranges of letter heights for these arrows are provided in the SHSM book. Diagrammatic guide signing is also provided in the SHSM book.

Information on the dimensions for arrows used in Overhead Arrow-per-Lane signing is in the USHSS.

5.A.7. Use of Abbreviations²⁹

Abbreviations (see Section 2.J) are useful when complete destination messages produce excessively wide signs.

5.A.8. Distance and Destination Signs³⁰

The direction of a roadway and the major destinations or control cities along it shall be clearly identified through the use of appropriate destination legends. Successive guide signs shall provide continuity in destination names and consistency with available map information. At any decision point, a given destination shall be indicated by way of only one route.

If Route shields and cardinal directions are included on a Destination sign, the height of the route shields should be at least two times the height of the upper-case letters of the principal legend and not less than 18 inches, and the cardinal directions should be in all upper-case letters that are at least the minimum height specified for these signs.

If used, the Distance (D2-1 through D2-3) sign (see MUTCD Figure 2D-7) shall be a horizontal rectangle of a size appropriate for the required legend, carrying the names of no more than three cities, towns, junctions, or other traffic generators, and the distance (to the nearest mile) to those places.

The distance numerals shall be placed to the right of the destination names as shown in MUTCD Figure 2D-7.

See MUTCD Section 2E.39 for information related to the cities or points that can be used and the process for determining the mileage number to be placed on Interstate distance signs.

A similar process should be used for distance signs on expressways and conventional roads³¹

²⁹ See [MUTCD Section 2E.17](#), and [1A.15](#) for acceptable abbreviations

³⁰ See [MUTCD Sections 2E.13](#) and [2E.39](#), [2D.36](#), [2D.37](#), and [2D.41](#)

³¹ See [MUTCD Chapter 2D](#)

5.A.9 Specific Service (Logo) Signs³²

All Specific Service (logo) signing impacted by a work zone shall be included in the scope of the project. This includes the reconstruction, relocation, and/or upgrade of signs and/or supports for the Specific Service Signs.

When Specific Service signs are impacted due to work, the signs shall be temporarily relocated so that they are displayed for the project duration. The project shall be responsible for any fees that need to be refunded to individual business for the direction(s) of travel when for more than a month the signs:

- Cannot be temporarily displayed; and/or
- The exit ramp is closed; and/or
- The interchange cross road is closed, thereby making the business inaccessible from one or both directions.

5.B. CONVENTIONAL ROADS³³

Standards for conventional road guide signs shall apply to any road or street other than low-volume roads³⁴, expressways, and freeways. See Section 5.C for specific information related to freeway and expressway guide signing

Some guide signs require customized designs that account for the variability in message or legend. Standardizing specifics of their design details assists the Department in its effort to provide uniformity to the traveling public. A few guide signs, such as route signs, have a standardized design. For standardized designs, refer to the USHSS and the SHSM book for general design guidelines.

5.B.1. Numbered Highway Systems³⁵

Route systems shall be given preference in this order: Interstate, United States, State, and County. The preference shall be given by installing the highest-priority legend on the top or the left of the sign. See Section 5.B.15 for further information on route sign priority.

5.B.2. Route Signs and Auxiliary Signs³⁶

All numbered highway routes shall be identified by route signs and auxiliary signs.

The signs for each system of numbered highways, which are distinctive in shape and color, shall be used only on that system and the approaches thereto.

³² See MUTCD Section 6A.02

³³ See MUTCD Chapter 2D

³⁴ See [MUTCD Section 5A.01](#)

³⁵ See [MUTCD Section 2D.09](#)

³⁶ See [MUTCD Section 2D.10](#)

Where United States or Utah Route signs are used as components of guide signs, only the outline of the shield or other distinctive shape should be used.

Route signs and auxiliary signs may be proportionally enlarged where greater legibility is needed.

Route signs are typically mounted in assemblies with auxiliary signs.

5.B.3. Design of Route Signs³⁷

The SHSM book shall be used for designing route signs other than the MS1 series (see USHSS) signs.

Figure 5-2 Route Signs



For conventional roads, the shield size shall be 24 x 24 inch for one or two digit routes and 30 x 24 inches for three digit route numbers. For freeways the shield shall be 36 x 36 for one or two digit routes and 45 x 36 for three digit route numbers.

All Interstate Route signs shall contain the word UTAH in white upper-case letters on the blue background (See MUTCD Figure 2E-17 or Figure 5-2)

For concurrent routes, all routes shall be signed. The shield size shall be the same for each route.

³⁷ See [MUTCD Section 2D.11](#)

5.B.4. Design of Route Sign Auxiliaries³⁸

Route sign auxiliaries carrying word legends, except the JCT sign, shall have a standard size of 24 x 12 inches. Those carrying arrow symbols, or the JCT sign, shall have a standard size of 21 x 15 inches.

With route signs of larger heights, auxiliary signs should be proportionally enlarged, but not such that they exceed the width of the route sign.

A route sign and any auxiliary signs used with it may be combined as a single guide sign.

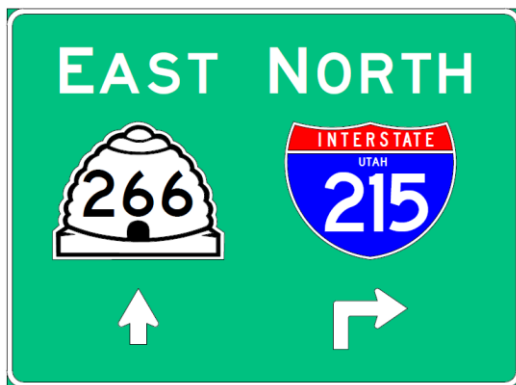
If an interstate route sign and its auxiliary signs are combined to form a single guide sign, either by itself or in combination with US or State route signs and their auxiliary signs, the background color of the sign should be green and the design should comply with the basic principles for the design of guide signs.

If a route sign and its auxiliary signs are combined on a single sign with a green background, the auxiliary messages shall be white legends placed directly on the green background. Auxiliary signs shall not be mounted directly to a guide sign or other type of sign. (See Figure 5-3 and USHSS)

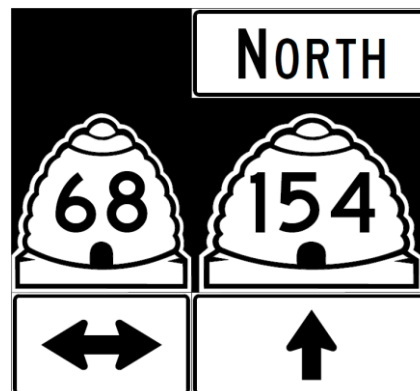
If a US or State route sign and its auxiliary signs are combined to form a single route assembly, the background color of the sign shall be black and the design should comply with the basic principles for the design of route signs. The width of the auxiliary signs shall be increased to match the width of the route signs. (See Figure 5-3 and USHSS)

Also as shown in Figure 5-3, any holes or gaps shall be black and non-reflective.

Figure 5-3 Examples of Combined Route Signs



MS1-10d



MS1-9s

5.B.5. Junction Auxiliary Sign

The Junction (M2-1) auxiliary sign (see [MUTCD Figure 2D-4](#)) shall carry the abbreviated legend JCT and shall be mounted at the top of an assembly directly above the route sign. The minimum size of the Junction auxiliary sign shall be 21 x 15 inches.

³⁸ See [MUTCD Section 2D.12](#)

5.B.6. Combination Junction Sign

As an alternative to the standard Junction assembly where more than one route is to be intersected or joined, a rectangular guide sign may be used carrying the word JUNCTION above the route number (M2-2) signs (see [MUTCD Figure 2D-4](#))

The Combination Junction shall have a green background with white border and lettering for the word JUNCTION.

Although the size of the Combination Junction sign will depend on the number of routes involved, the numerals should be large enough for clear legibility and should be of a size comparable with those in the individual route signs.

5.B.7. Cardinal Direction Auxiliary Signs³⁹

Cardinal Direction (M3-1 through M4-1) auxiliary signs (see [MUTCD Figure 2D-4](#)) carrying the legend NORTH, EAST, SOUTH, or WEST should be used to indicate the designated direction of the route. Information regarding highway referencing and route directions can be found on the UDOT web site.

To improve the readability and recognition of the cardinal directions, the first letter of the cardinal direction words shall be ten percent larger.

If used, the Cardinal Direction auxiliary sign shall be mounted directly above a route sign, or if used, an auxiliary sign for an alternative route. See section 5.B.14 for route sign assembly mounting height.

5.B.8. Auxiliary Signs for Alternative Routes⁴⁰

Auxiliary (M4-1 through M4-4) signs, carrying legends such as ALTERNATE, BY-PASS, BUSINESS, or TRUCK (see [MUTCD Figure 2D-4](#)), may be used to indicate an alternate route of the same number between two points on that route.

If used, the auxiliary signs for alternative routes shall be mounted directly above a route sign. 2A18 P10

5.B.9. TO, END, BEGIN, and TEMPORARY Auxiliary Signs⁴¹

Specifics related to the design of TO, END, TEMPORARY and TEMP auxiliary signs are found in [MUTCD Sections 2D.21 through 2D.24](#).

5.B.10. Temporary Detour and Auxiliary Signs

[MUTCD Chapter 6F](#) contains information regarding Temporary Detour and Auxiliary signs.

³⁹ See [MUTCD Section 2D.15](#)

⁴⁰ See [MUTCD Section 2D.16](#)

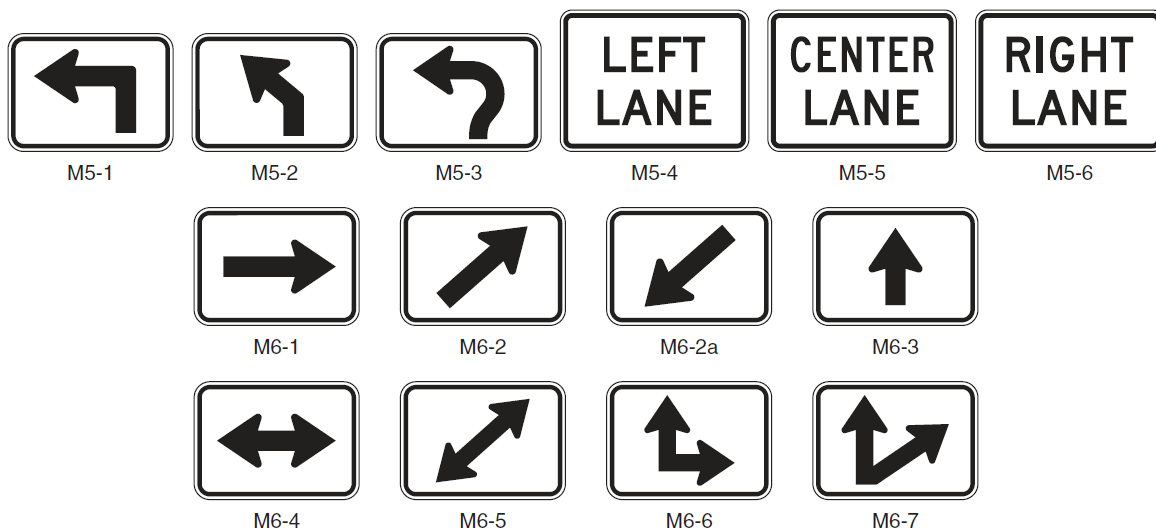
⁴¹ See [MUTCD Section 2D.21 through 2D.24](#)

5.B.11. Advance Turn Arrow and Directional Arrow Auxiliary Signs⁴²

If used, the Advance Turn Arrow (M5-1 through M5-3) auxiliary sign (see Figure 5-4) shall be mounted directly below the route sign in Advance Route Turn assemblies, and display a right or left arrow, the shaft of which is bent at a 90-degree angle (M5-1) or at a 45-degree angle (M5-2) or (M5-3) curved arrow

If used, the Directional Arrow auxiliary sign (see M6 Series; Figure 5-4) shall be mounted below the route sign and any other auxiliary signs in Directional assemblies, and display a single- or double-headed arrow pointing in the general direction that the route follows.

Figure 5-4 Advance Turn and Directional Arrow Auxiliary Signs



5.B.12 Lane Designation Auxiliary Signs⁴³

A Lane Designation (M5-4, M5-5, or M5-6) auxiliary sign (see Figure 5-4) may be mounted directly below the route sign in an Advance Route Turn assembly on multi-lane roadways to allow road users to move into the appropriate lane prior to reaching the intersection or interchange.

If used, the Lane Designation auxiliary signs shall be used only where the designated lane is a mandatory movement lane and shall be located adjacent to the full-width portion of the mandatory movement lane. The Lane Designation auxiliary signs shall not be installed adjacent to a through lane, in advance of a lane that is being added, or along the taper for a lane that is being added.

⁴² See [MUTCD Section 2D.26 and 2D.28](#)

⁴³ See [MUTCD Section 2D.27](#)

5.B.13. Route Sign Assemblies⁴⁴

A Route Sign assembly shall consist of a route sign and auxiliary signs that further identify the route and indicate the direction.

Route Sign assemblies shall be installed on all approaches to numbered routes that intersect with other numbered routes.

Where two or more routes follow the same section of highway, the route signs for Interstate, U.S., State, and County routes shall be mounted in that order from the left in horizontal arrangements and from the top in vertical arrangements. Subject to this order of precedence, route signs for lower-numbered routes shall be placed at the left or top.

Within groups of assemblies, information for straight-through shall be mounted at the center in horizontal arrangements or top in vertical arrangements. Information for routes intersecting from the left shall be mounted at the left in horizontal arrangements and at the top if there are no straight-through routes or below such in vertical arrangements. Similarly, information for routes intersecting from the right shall be at mounted the right or below any routes straight-through or from the left. See Section 5.B.15 for the order and position of route assemblies.

Assemblies for two or more routes, or for different directions on the same route, should be mounted on a common support.

Route Sign assemblies may be installed on the approaches to numbered routes on unnumbered roads and streets that carry an appreciable amount of traffic destined for the numbered route.

If engineering judgment indicates that groups of assemblies that include overlapping routes or multiple turns might be confusing, route signs or auxiliary signs may be omitted or combined, provided that clear directions are given to road users.

[MUTCD Figure 2D-6](#) shows typical arrangements and placements of route signs.

5.B.14. Route Sign Assembly Mounting Height⁴⁵

Route Sign assemblies shall be mounted in accordance with the general specifications for signs, with the lowest sign in the assembly at the height prescribed for single signs.

All route signs, warning signs, and regulatory signs on freeways and expressways shall be installed with a minimum height of 7 feet, measured vertically from the bottom of the sign to the elevation of the near edge of the pavement⁴⁶

Where large signs having an area exceeding 50 square feet are installed on multiple breakaway posts, the clearance from the ground to the bottom of the sign shall be at least 7 feet.

Assemblies for two or more routes, or for different directions on the same route, should be mounted in groups on a common support.

⁴⁴ See also [MUTCD Section 2D.29](#)

⁴⁵ See MUTCD Section 2D.29

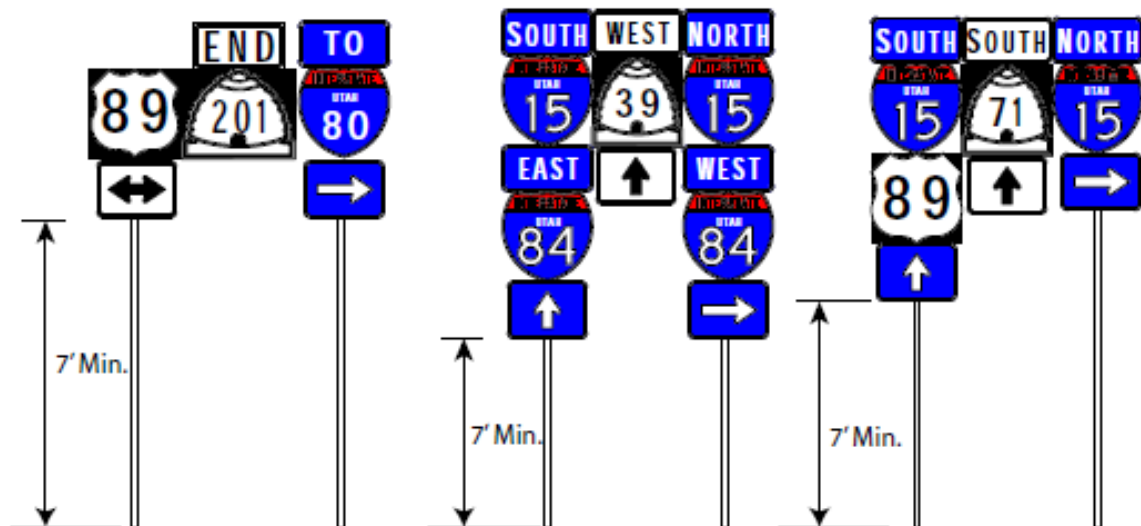
⁴⁶ See MUTCD Section 2A.18

5.B.15. Prioritization of Route Sign Assemblies

The prioritization of route sign assemblies is as follows:

- Step 1. Route assemblies shall be prioritized first by the Arrow Auxiliary sign (see Figure 5-4) direction in the following manner:
- A. When Route assemblies are arranged horizontally, the Route assembly shall be prioritized from left to right in the following order if present:
 - 1). Left pointing arrow signs;
 - 2). Up pointing arrow signs and those without an arrow sign;
 - 3). Right pointing arrow signs.
 - B. When Route assemblies are arranged vertically, the Route assemblies shall be prioritized from top to bottom in the following order if present:
 - 1). Up pointing arrow signs;
 - 2). Left pointing arrow signs;
 - 3). Right pointing arrow signs;
 - 4). Those without an arrow sign.
 - C. Bi-directional Arrow Auxiliary Signs (M6-4, M6-5, M6-6 and M6-7) shall be prioritized by route classification in Step 2.
- Step 2. Each Route assembly group (A, B, and C) shall be prioritized from Step 1 in a left-to-right or top-to-bottom arrangement by the route classification with Interstate(s) being the priority (top or left), followed by United States Route(s), State Route(s), and then County Route(s) assemblies respectively.
- Step 3. When there is more than one of the same route classification in each directional group (i.e. US 6; US 50), the same route classification assemblies shall be arranged by the lower numbered routes being placed at the top or left of the higher number Route assemblies.

Figure 5-5 Examples of Assembly Priority



5.B.16. Junction Assembly⁴⁷

A Junction assembly shall consist of a Junction auxiliary sign and a route sign. The route sign shall carry the number of the intersected or joined route.

The Junction assembly shall be installed in advance of every intersection where a numbered route is intersected or joined by another numbered route.

Where two or more routes are to be indicated, a single Junction auxiliary sign may be used for the assembly and all route signs grouped in a single mounting, or a Combination Junction sign may be used.

5.B.17. Advance Route Turn Assembly⁴⁸

An Advance Route Turn assembly shall consist of a route sign, an Advance Turn Arrow or word message auxiliary sign, and a Cardinal Direction auxiliary sign, if needed.

It shall be installed in advance of an intersection where a turn must be made to remain on the indicated route.

The Advance Route Turn assembly may be used to supplement the required Junction assembly in advance of intersecting routes.

Where a multiple-lane highway approaches an interchange or intersection with a numbered route, the Advance Route Turn assembly should be used to pre-position turning vehicles in the correct lanes from which to make their turn.

An assembly that includes an Advance Turn Arrow auxiliary sign shall not be placed where there is an intersection between it and the designated turn.

Sufficient distance should be allowed between the assembly and any preceding intersection that could be mistaken for the indicated turn.

5.B.18. Directional Assembly⁴⁹

Directional assembly shall consist of a Cardinal Direction auxiliary sign if needed, a route sign and a Directional Arrow auxiliary sign. The various uses of Directional assemblies shall be as provided in Items A through D:

- A - Turn movements (indicated in advance by an Advance Route Turn assembly) shall be marked by a Directional assembly with a route sign displaying the number of the turning route and a single-headed arrow pointing in the direction of the turn.
- B - The beginning of a route (indicated in advance by a Junction assembly) shall be marked by a Directional assembly with a route sign displaying the number of that route and a single-headed arrow pointing in the direction of the route.
- C - An intersected route (indicated in advance by a Junction assembly) shall be designated by:

⁴⁷ See also [MUTCD Section 2D.30](#)

⁴⁸ See also [MUTCD Section 2D.31](#)

⁴⁹ See Also [MUTCD Section 2D.32](#)

- Two Directional assemblies, each with a route sign displaying the number of the intersected route, a Cardinal Direction auxiliary sign, and a single headed arrow pointing in the direction of movement on that route; or
- A Directional assembly with a route sign displaying the number of the intersected route and a double-headed arrow, pointing at appropriate angles to the left, right, or ahead.

D - An intersected route (indicated in advance by a Junction assembly) on a side road or on a crossroad where the route is designated only on one of the legs shall be designated by a Directional assembly with a route sign displaying the number of the intersected route, a Cardinal Direction auxiliary sign, and a single-headed arrow pointing in the direction of movement on that route.

Straight-through movements should be indicated by a Directional assembly with a route sign displaying the number of the continuing route and a vertical arrow. A Directional assembly should not be used for a straight-through movement in the absence of other assemblies indicating right or left turns, as the Confirming assembly sign beyond the intersection normally provides adequate guidance.

[MUTCD Figure 2D-6](#) shows typical placements of Directional assemblies.

5.B.19. Combination Lane-Use/Destination Overhead Guide Sign⁵⁰

At complex intersection approaches involving multiple turn lanes and destinations, a Combination Lane-Use/Destination (D15-1) overhead guide sign that combines a lane-use regulatory sign with destination information such as a cardinal direction, a route number, a street name, and/or a place name may be used.

At such locations, the combined information on the D15-1 signs can be even more effective than separate lane-use and guide signs for conveying to unfamiliar drivers which lane or lanes to use for a particular destination.

The Combination Lane-Use/Destination (D15-1) overhead guide sign shall be used only where the designated lane is a mandatory movement lane. The D15-1 sign shall not be used for lanes with optional movements.

The D15-1 sign shall have a green background with a white border. As shown in [MUTCD Figure 2D-7](#), the lane-use sign (see [MUTCD Chapter 2B](#)) shall be placed near the bottom of the sign and the destination information shall be placed near the top of the sign. The D15-1 sign shall be located approximately over the center of the lane to which it applies.

5.B.20. Confirming or Reassurance Assemblies⁵¹

If used, Confirming or Reassurance assemblies shall consist of a Cardinal Direction auxiliary sign and a route sign. Where the Confirming or Reassurance assembly is for an alternative route, the appropriate auxiliary sign for an alternative route (see Section 5.B.8) shall also be included in the assembly.

If used, Reassurance assemblies should be installed between intersections in urban districts as needed, and beyond the built-up area of any incorporated City or Town.

⁵⁰ See also [MUTCD Section 2D.33](#)

⁵¹ See also [MUTCD Section 2D.34](#)

5.B.21. Trailblazer Assembly⁵²

Trailblazer assemblies provide directional guidance to a particular road facility from other highways in the vicinity. This guidance is accomplished by installing Trailblazer assemblies at strategic locations to indicate the direction to the nearest or most convenient point of access. The use of the word TO indicates that the road or street where the sign is posted is not a part of the indicated route, and that a road user is merely being directed progressively to the route.

A Trailblazer assembly shall consist of a TO auxiliary sign, a route sign for a numbered or named highway⁵³ or an Auto Tour Route sign⁵⁴, and a single-headed Directional Arrow auxiliary sign pointing in the direction leading to the route. Where the Trailblazer assembly is for an alternative route, the appropriate auxiliary sign for an alternative route shall also be included in the assembly. A Cardinal Direction auxiliary sign may be used with a Trailblazer assembly.

The TO auxiliary sign, Cardinal Direction auxiliary sign, and Directional Arrow auxiliary sign should be of the standard size provided for auxiliary signs of their respective type.

Trailblazer assemblies may be installed with other Route Sign assemblies, or alone, in the immediate vicinity of the designated facilities.

5.B.22. Memorial or Dedication Signing⁵⁵

Memorial or dedication names should not appear on or along a highway, or be placed on bridges or other highway components. If a route, bridge, or highway component is officially designated as a memorial or dedication, and if notification of the memorial or dedication is to be made on the highway right-of-way, such notification should consist of installing a memorial or dedication marker in a rest area, scenic overlook, recreational area, or other appropriate location where parking is provided with the signing inconspicuously located relative to vehicle operations along the highway.

If the installation of a memorial or dedication marker off the main roadway is not practical, memorial or dedication signs may be installed on the mainline.

Memorial or dedication signs should have a white legend and border on a brown background.

Where such memorial or dedication signs are installed on the mainline, (1) memorial or dedication names shall not appear on directional guide signs, (2) memorial or dedication signs shall not interfere with the placement of any other necessary signing, and (3) memorial or dedication signs shall not compromise the safety or efficiency of traffic flow. The memorial or dedication signing shall be limited to one sign at an appropriate location in each route direction, each as an independent sign installation.

Memorial or dedication signs shall be rectangular in shape. The legend displayed on memorial or dedication signs shall be limited to the name of the person or entity being recognized and a simple message preceding or following the name, such as "Dedicated to"

⁵² See also [MUTCD Section 2D.35](#)

⁵³ See [MUTCD Section 2D.53](#)

⁵⁴ See [MUTCD Section 2H.07](#)

⁵⁵ See [MUTCD Section 2M.10](#)

or “Memorial Parkway.” Additional legend, such as biographical information, shall not be displayed on memorial or dedication signs. Decorative or graphical elements, pictographs, logos, or symbols shall not be displayed on memorial or dedication signs. All letters and numerals displayed on memorial or dedication signs shall be as provided in the SHSM book. The route number or officially mapped name of the highway shall not be displayed on the memorial or dedication sign.

Memorial or dedication names shall not appear on supplemental signs or on any other information sign on or along the highway or its intersecting routes.

The lettering for the name of the person or entity being recognized may be composed of a combination of lower-case letters with initial upper-case letters.

Freeways and expressways should not be signed as memorial or dedicated highways.

Named highways are officially designated and shown on official maps and serve the purpose of providing route guidance, primarily on unnumbered highways. A highway designated as a memorial or dedication is not considered to be a named highway. MUTCD Section 2D.53 contains provisions for the signing of named highways.

5.B.23. Scenic Byways Signing⁵⁶

Scenic Byways include National Scenic Byways, All-American Roads, State Scenic Byways, and State Scenic Backways. Roads designated as Scenic Byways in Utah can be found in Utah Administrative Code Rules R926-13 and R926-15.

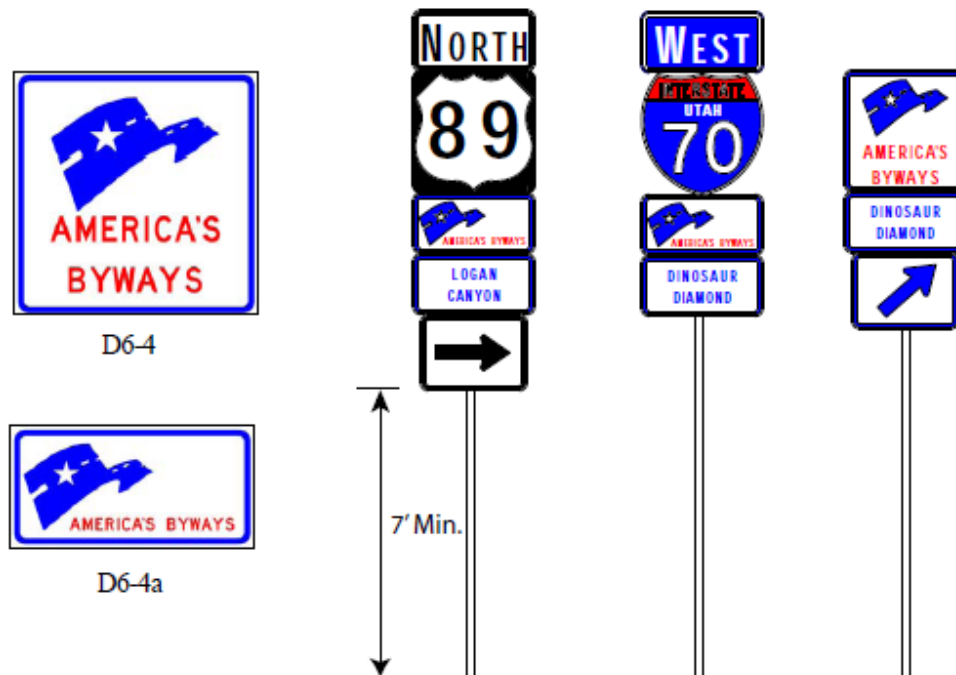
Certain roads have been designated by the U.S. Secretary of Transportation as National Scenic Byways or All-American Roads based on their archeological, cultural, historic, natural, recreational, or scenic qualities.

State and local highway agencies may install the National Scenic Byways (D6-4 or D6-4a) signs at entrance points to a route that has been recognized by the U.S. Secretary of Transportation as a National Scenic Byway or an All-American Road. The D6-4 or D6-4a sign may be installed on route sign assemblies (see Figure 5-6) or as part of larger roadside structures. National Scenic Byways signs may also be installed at periodic intervals along the designated route and at intersections where the designated route turns or follows a different numbered highway.

At locations where roadside features have been developed to enhance the traveler’s experience such as rest areas, historic sites, interpretive facilities, or scenic overlooks, the Scenic Byways sign may be placed on the associated sign assembly to inform travelers that the site contributes to the byway travel experience.

⁵⁶ See [MUTCD Sections 2D.55 and 2D.56](#)

Figure 5-6 Examples of National Scenic Byways Signing



When a National Scenic Byways sign is installed on a National Scenic Byway or an All-American Road, the design shown for the D6-4 or D6-4a sign in Figure 5-6 shall be used. Use of this design shall be limited to routes that have been designated as a National Scenic Byway or All-American Road by the U.S. Secretary of Transportation.

If used, the Scenic Byways sign shall be placed such that the roadway route signs have primary visibility for the road user.

When used, Scenic Byways signs shall be designed and installed in accordance with the MUTCD and this Manual, and shall always be considered secondary to other signing.

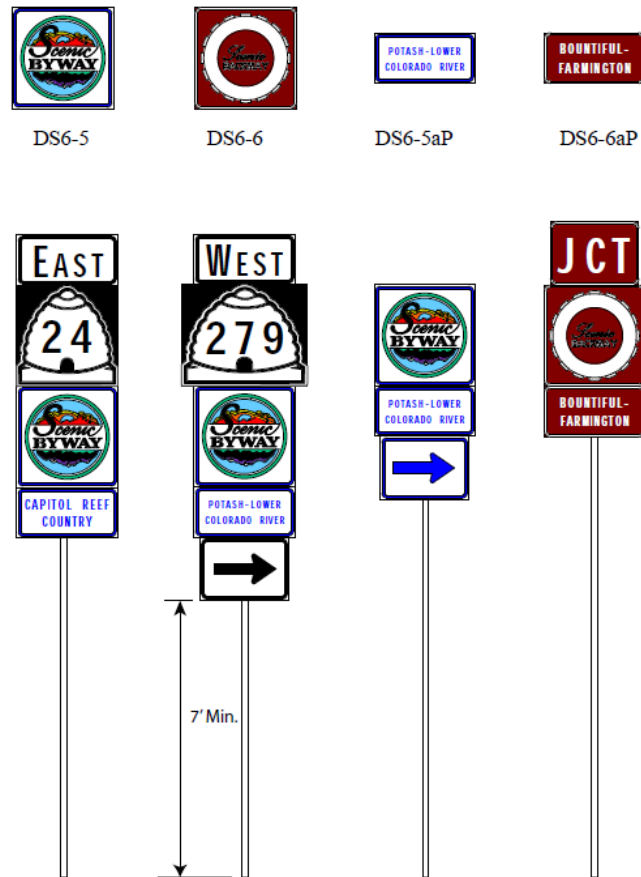
Signing for Scenic Byways shall be limited to roads that have been officially designated, and on other roads where they intersect with the designated routes.

If used, roads that have been designated by the State of Utah as State Scenic Byways shall be signed with the Utah Scenic Byways (DS6-5) sign. Those roads designated as State Scenic Backways shall be signed with the Scenic Backways (DS6-6) sign.

Except as provided in the next paragraph, when a road is designated both as a National Scenic Byway and a State Scenic Byway, the road shall only be signed as a National Scenic Byway.

When a road is designated as both a National Scenic Byway and a State Scenic Byway, a State Scenic Byways assembly may be added to the National Scenic Byways assembly.

Figure 5-7 Examples of State Scenic Byways and Backways Signing



A Scenic Byways assembly (see Figures 5-6 and 5-7) shall include a Scenic Byways (D6-4, D6-4a, DS6-5 or DS6-6) sign above the appropriate Scenic Byways Designation (DS6-5aP or DS6-6aP) plaque with the designated name of the Scenic Byway.

The Scenic Byways Designation plaque shall be the same width and color (legend, background, and border) as the Scenic Byways sign.

The height of the Scenic Byways Designation plaque may vary depending on the designated name.

Except for State Scenic Backways, when auxiliary (Junction (M2-1), Advanced Route Turn (M5 series), Directional (M6 series), and END (M4-6)) signs are part of a separate Scenic Byways supplemental assembly, the auxiliary signs shall have a blue legend and border on a white background. When State Scenic Backways auxiliary signs are part of a separate Scenic Backways supplemental assembly, the auxiliary signs shall have a white legend and border on a brown background.

If the Scenic Byways sign is placed below a Route (MS1 series) sign, the auxiliary signs shall be the standard colors for the primary route.

Scenic Byways assemblies should be placed directly below the route sign in the route assembly.

The Scenic Byways signing may be placed on an adjacent Scenic Byways supplemental assembly next to the route assembly that it supplements.

Except for State Scenic Backways, place a Scenic Byways Junction assembly (M2-1 sign above the Route or Scenic Byways sign) and Scenic Byways Directional assembly (M6 series sign below the Scenic Byways Designation plaque) on each intersecting road at both ends of the designated route. Junction assemblies for Scenic Backways shall be placed on each intersecting road at both ends of the designated route.

Scenic Byways Junction and Directional assemblies may be placed on the approach legs of intersecting roads not at the ends of Scenic Byways.

Scenic Byways Advanced Route Turn (a M5 series sign below the Designation plaque) and Directional assemblies shall be placed where a turn must be made to remain on the designated route.

When used on freeways at interchanges, a Scenic Byways assembly shall not be placed on freeway interchange guide signs or their supports, but shall be placed a minimum of 400 feet in advance of the Exit Direction sign as separate Scenic Byways assembly. The Scenic Byways assembly shall not block the view of the Exit Direction sign.

Except for State Scenic Backways, Scenic Byways Confirmation (a Scenic Byways assembly) signing shall be placed on the designated route immediately after an intersection with a road that has Scenic Byways Junction and Directional assemblies.

Scenic Byways Confirmation signing may be placed along the designated route at other locations.

An End Scenic Byways assembly (a M4-6 sign above the Route or Scenic Byways sign) shall be placed at both ends of the designated route.

A Route sign assembly that includes a Scenic Byways assembly shall have the bottom of the lowest sign in the combined assembly at the height prescribed for single signs (see Section 5.B.14).

Scenic Byways supplemental assemblies shall be placed such that the bottom of the Scenic Byways sign is level with the bottom of the adjacent route sign.

5.B.24. Additional Sign References

Table 5-1 Additional References to Conventional Road Signing in MUTCD

Sign/Topic	MUTCD Section
Destination Signs at Circular Intersections	2D.38
Location of Destination Signs	2D.40
Distance Signs	2D.41 and 2D.42
Street Name and Advance Street Name Signs	2D.43 and 2D.44

Signing on Conventional Roads on Approaches to Interchanges	<u>2D.45</u>
Freeway Entrance Signs	<u>2D.46</u>
Parking Area Guide Sign	<u>2D.47</u>
PARK - RIDE Sign	<u>2D.48</u>
Weigh Station Signing	<u>2D.49</u>
Community Wayfinding Signs	<u>2D.50</u>
Truck, Passing, and Climbing Lane Signs	<u>2D.51</u>
Slow Vehicle Turn-Out Sign	<u>2D.52</u>
Signing of Named Highways	<u>2D.53</u>
Crossover Signs	<u>2D.54</u>
Scenic Byways Signs	<u>2D.55</u> and <u>2D.56</u>

5.C. FREEWAYS AND EXPRESSWAYS⁵⁷

These provisions provide a uniform and effective system of highway signing for high-volume, high-speed motor vehicle traffic on freeways and expressways.

Guide signs for freeways and expressways are primarily identified by the name of the sign rather than by an assigned sign designation. Guide sign installations are an integral part of the freeway or expressway facility and, as such, are best planned concurrently with the development of highway location and geometric design.

Freeway and expressway signing is to be considered and developed as a planned system of installations.

Standard shapes and colors shall be used so that traffic signs can be promptly recognized by road users (see Section 2.G).

Refer to Section 5.A.3 for guidance on the use of destination names and pictographs in sign legend.

5.C.1. Overhead Signs⁵⁸

Overhead signs should be used on freeways and expressways, at locations where some degree of lane-use control is desirable, and at locations where space is not available at the roadside.

An Overhead Exit Direction sign should be located near the theoretical gore and generally on an overhead sign support structure. The theoretical gore is the point where the mainline and ramp edge lines come together.

The operational requirements of the present highway system are such that overhead signs have value at many locations. The factors to be considered for the installation of overhead sign displays are not definable in specific numerical terms.

The following conditions (not in priority order) may be considered in an engineering study to determine if overhead signs would be beneficial:

- Traffic volume at or near capacity;
- Complex interchange design;
- Three or more lanes in each direction;
- Restricted sight distance;
- Closely spaced interchanges;
- Multi-lane exits;
- Large percentage of trucks;
- Street lighting background;
- High-speed traffic;
- Consistency of sign message location through a series of interchanges;
- Insufficient space for ground-mounted signs
- Junction of two freeways; and Left exit ramps.

⁵⁷ See also [MUTCD Chapter 2E](#)

⁵⁸ See [MUTCD Section 2A.17](#) and [2E.25](#)

Overhead Guide Signs within Davis, Salt Lake, Utah, Washington, and Weber counties shall use the sizes of MUTCD Table 2E-4 Major Interchange Classification, Category a.

5.C.2. Number of Signs at an Overhead Installation and Sign Spreading⁵⁹

If overhead signs are warranted, the number of signs at these locations should be limited to only those essential in communicating pertinent destination information to the road user.

Exit Direction signs for a single exit and the Advance Guide signs should have only one sign with one or two destinations.

Regulatory signs, such as speed limits, should not be used in conjunction with overhead guide sign installations.

There should not be more than three guide signs displayed at any one location on an overhead structure or its support.

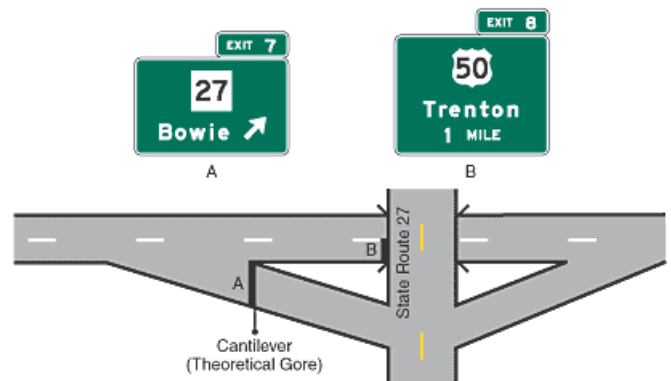
At overhead locations, more than one sign may be installed to advise of a multiple exit condition at an interchange. If the roadway ramp or crossing roadway has complex or unusual geometrics, additional signs with confirming messages may be provided to properly guide the road user.

Sign spreading is a concept where major overhead signs are spaced along the freeway or expressway (see Figure 5-8) so that road users are not overloaded with a group of signs at a single location.

Where overhead signing is used, sign spreading should be used at all single exit interchanges and to the extent possible at multi-exit interchanges. Sign spreading should be accomplished by use of the following:

- The Exit Direction sign should be the only sign used in the vicinity of the gore (other than the Exit Gore sign). It should be located overhead near the theoretical gore and generally on an overhead sign support structure.
- The Advance Guide sign to indicate the next interchange exit should be placed near the crossroad location.

Figure 5-8 Example of Guide Sign Spreading



⁵⁹ See [MUTCD Section 2E.11](#)

5.C.3. Pull-Through Signing⁶⁰

Pull-Through signs (see Figure 5-9) are overhead guide signs intended for through traffic.

Pull-Through signs should be used where the geometrics of a given interchange are such that it is not clear to the road user as to which is the through roadway, or where additional route guidance is desired.

Pull-Through signs with down arrows should be used as follows:

- Where the alignment of the through lanes is curved and the exit direction is straight ahead; or,
- Where the number of through lanes is not readily evident; or,
- At multi-lane exits where there is a reduction in the number of through lanes.

Figure 5-9 Examples of Pull-Through Signs



5.C.4. Signing for Option Lanes and Splits and Multi-Lane Exits⁶¹

Definitions:

System Interchange - an interchange between freeways or highways built to freeway standards

Non-System Interchange - an interchange that does not qualify as a System Interchange.

Some freeway and expressway splits or multi-lane exit interchanges contain an interior option lane serving both movements in which traffic can either leave the route or remain on the route, or choose either destination at a split, from the same lane.

On freeways and expressways, the System Interchange Overhead Arrow-per-Lane as provided in Section 5.C.5 shall be used for all multi-lane exits at system interchanges that have an optional exit lane that also carries the through route (see Figure 5-10) and for all splits that include an option lane (see Figure 5-11), except as specifically provided in this section. Overhead Arrow-per-Lane guide signs shall not be used on freeways and expressways for any other types of exits or splits, including single-lane exits and splits that do not have an option lane.

The Non-System Interchange Overhead Arrow-per-Lane guide sign design (see Section 5.C.6) shall be used for multi-lane exits with an option lane at non-system interchanges, except as specifically provided in this section.

If replacement or relocation of an existing sign structure is required as a result of reconstruction, typically due to either widening or reconfiguration of the travel lanes, the signing and the sign structure shall be updated to meet Arrow-per-Lane requirements.

⁶⁰ See [MUTCD Section 2E.12](#)

⁶¹ See [MUTCD Section 2E.20](#)

If an existing sign structure is to remain in place and the structure has sufficient capacity to support the larger Arrow-per-Lane signs, the signing shall be updated to meet Arrow-per-Lane requirements.

If an existing sign structure is to remain in place but does not have structural capacity to support the larger Arrow-per-Lane signs, the existing signing may remain or be replaced in-kind provided that other provisions within the MUTCD are not violated.

The MUTCD allows the use of Diagrammatic guide signs as an alternate for Overhead Arrow-per Lane signs, however, use of Diagrammatic guide signs must be coordinated with the Department (See Section 5.C.8)

5.C.5. Design of System Interchange Overhead Arrow-per-Lane Guide Signs for Option Lanes⁶²

System Interchange (see Section 5.C.4) Overhead Arrow-per-Lane guide signs (see Figure 5-10 and 5-11) are used where an option lane is present at system multi-lane exit interchanges and splits. They display an upward-pointing arrow above each lane that conveys the direction(s) of travel that the lane serves at the point of departure. At locations where an option lane is present at a multi-lane exit or split, System Interchange Overhead Arrow-per-Lane guide signs have been shown to be superior to either conventional guide signs or Diagrammatic guide signs because they convey positive direction about which destination and direction each approach lane serves, particularly for the option lane, which is otherwise difficult to clearly sign.

System Interchange Overhead Arrow-per-Lane guide signs shall be used on all new or reconstructed system interchanges as described in Section 5.C.4 and shown in Figure 5-10 and Figure 5-11.

The Overhead Arrow-per-Lane guide sign at the exit or split shall be located at or in the immediate vicinity of the point where the exiting lanes begin to diverge from the through lanes or, for a split, at the point where the approach lanes begin to diverge from one another, preserving the relation of the arrows displayed on the sign to their respective lanes. The Overhead Arrow-per-Lane guide sign at the exit shall not be located at or near the theoretical gore.

At existing or non-reconstructed locations where Exit Direction and Pull-Through signs exist at the theoretical gore, the existing sign support structure may remain in place, continuing to use Exit Direction and Pull-Through signs, in conjunction with a replacement of the advance signs using the Overhead Arrow-per-Lane guide sign design.

If existing Exit Direction and Pull-Through signs are being retained at an interchange, an Overhead Arrow-per-Lane guide sign shall not be used at the location of the Exit Direction and Pull-Through signs at or in the vicinity of the theoretical gore. New installations of Exit Direction and Pull-Through signs at the theoretical gore shall not be permitted in conjunction with Overhead Arrow-per-Lane guide signs on new or reconstructed facilities.

System Interchange Overhead Arrow-per-Lane guide signs shall be located at approximately 1/2 mile and 1 mile in advance of the exit or split

⁶² See [MUTCD Section 2E.21](#)

System Interchange Overhead Arrow-per-Lane guide signs should be located at approximately 2 miles in advance of the exit or split where space is available and conditions allow.

System Interchange Overhead Arrow-per-Lane guide signs used on system interchanges shall include one arrow above each lane and shall be designed in accordance with the following criteria:

- A - The sign shall include an upward-pointing arrow for each lane of the approach to the split or exit, and the shaft of each arrow shall be located approximately over the center of the lane to which it applies.
- B - Arrows for continuing through lanes shall be vertically upward pointing (see Figure 5-10) unless those lanes are on a significantly curved alignment beyond the theoretical gore, in which case the arrows for the continuing through lanes shall indicate the approximate degree of curvature (see Figure 5-11).
- C - The arrow for a lane that must exit shall be curved in the direction of the exit and shall be accompanied by black-on-yellow EXIT (E11-1a) and ONLY (E11-1b) sign panels adjacent to the lower end of the arrow shaft. The E11-1a and E11-1b sign panels shall not be used for a split of two overlapping routes where neither of the diverging routes is designated as an exit. Where the through lanes curve and the exit continues on a straight alignment, upward-pointing vertical arrows shall be used for the exiting movement and curved arrows for the through movement.
- D - The arrow for an optional exit lane that also carries the through route shall have a single shaft that bifurcates into a vertically upward-pointing arrow and a curving arrow corresponding to the configuration of the through and exit lanes.
- E - For splits with an option lane, the arrow for the lane from which either direction of the split can be accessed shall have a single shaft that bifurcates into two upward-pointing curving arrows showing the approximate degrees of curvature of the two roadways beyond the theoretical gore (see Figure 5-11).
- F - A vertical white line shall be used to separate the route shields and destinations for the two diverging movements from each other.
- G - The distance to the exit or split shall be displayed below the off-movement destination on the advance signs at the 1-mile and 2-mile locations.
- H - The number of lanes displayed on a sign shall correspond to the number of lanes at the location of that sign. An advance sign shall not depict lanes that are added downstream of a sign location.
- I - For numbered exits, the Exit Number (E1-5P) or Left Exit Number (E1-5bP) plaque shall be used at the top of the sign in accordance with MUTCD Section 2E.31. For unnumbered left exits, the LEFT (E1-5aP) plaque shall be used at the top left edge of the sign.

Overhead Arrow-per-Lane guide signs used on freeways and expressways should be designed in accordance with the following additional criteria:

- A - No more than one destination should be displayed for each movement, and no more than two destinations should be displayed per sign.
- B - The arrowhead(s) for the diverging movement should be positioned lower on the sign than the arrowhead(s) for the movement that continues straight ahead, independent of which movement carries the through route. Where the movements are freeway or expressway splits rather than exits, the arrowheads should be positioned at approximately the same height on the sign.

- C - Route shields, cardinal directions, and destinations should be positioned on the sign such that they are clearly related to the arrowhead(s) for the movement to which they apply.
- D - The cardinal direction should be placed adjacent to the route shield for exits or splits leading in a single cardinal direction.
- E - The vertical white line that is used to separate the route shields and destinations for the two diverging movements from each other should not descend below the top of the arrowheads for the through lanes, and should be positioned approximately halfway between the diverging arrowheads for the optional movement lane (see MUTCD Figure 2E-3).

Overhead Arrow-per-Lane guide signs located on the mainline shall not be used to depict a downstream split of an exit ramp.

Specific guidelines for more detailed design of Overhead Arrow-per-Lane guide signs are contained in the SHSM book and the USHSS.

Where extra emphasis of an especially low advisory ramp speed is needed, an EXIT XX MPH (E13-2) sign panel⁶³ may be placed below the applicable destination legend to supplement, but not to replace, the exit or ramp advisory speed warning signs.

⁶³ see [MUTCD Figure 2E-27](#)

Figure 5-10 Overhead Arrow-per-Lane Guide Signs for a Two-Lane System Interchange Exit to the Right with an Option Lane

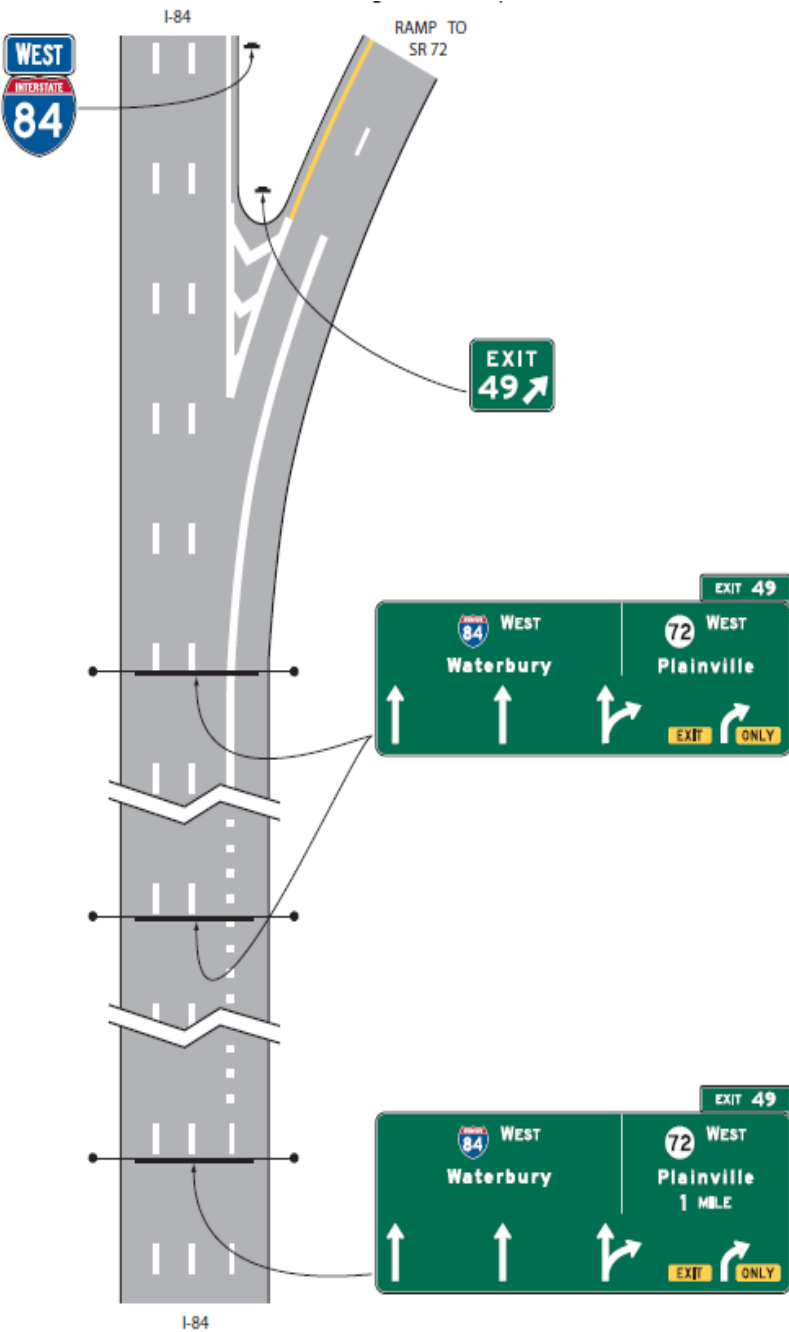
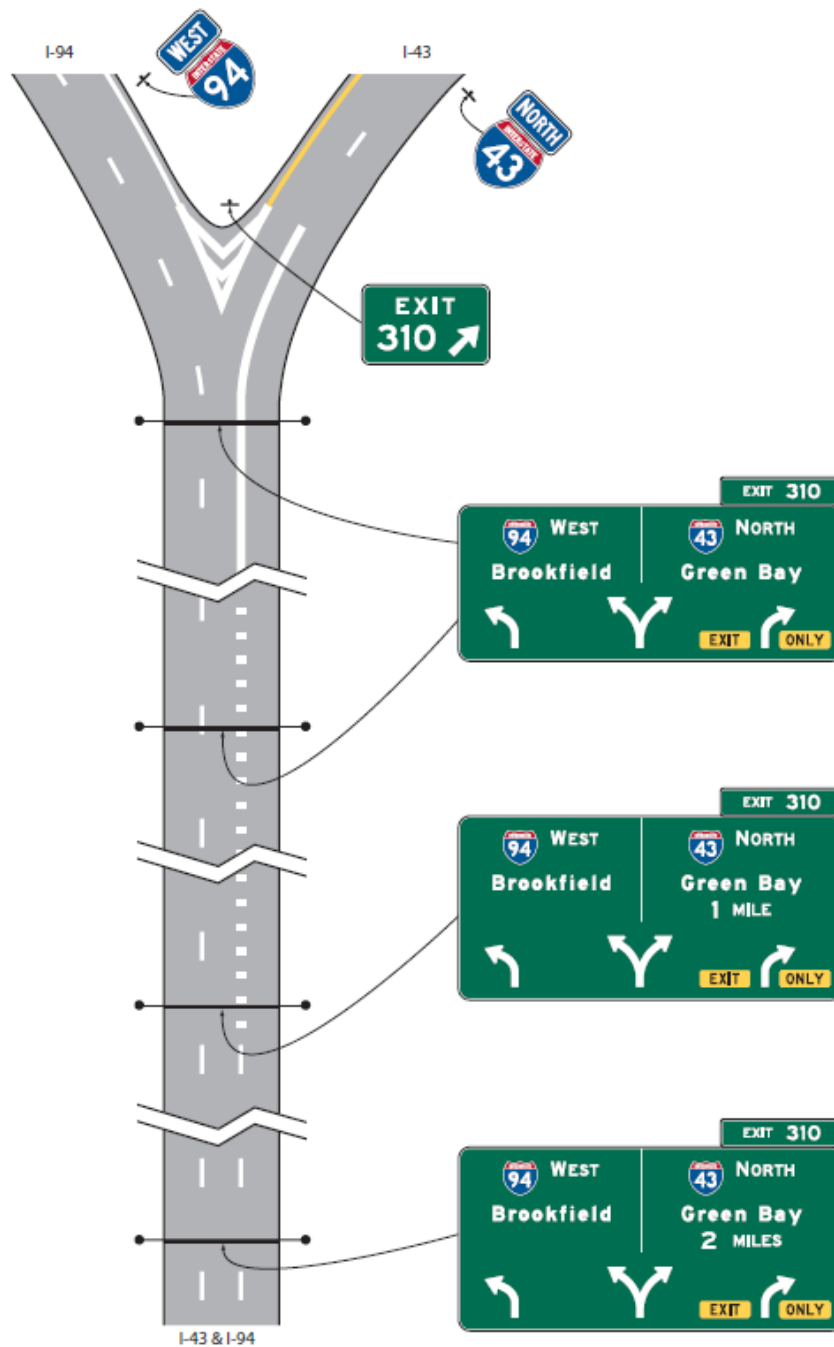


Figure 5-11 Overhead Arrow-per-Lane Guide Signs for a Split System Interchange with an Option



5.C.6. Signing for Non-System Interchange Multi-Lane Exits with an Option Lane Drop⁶⁴

Definitions:

System Interchange - an interchange between freeways or highways built to freeway standards

Non-System Interchange - an interchange that does not qualify as a System Interchange.

Non-System Interchange Overhead Arrow per Lane guide signing shall be used on all new or reconstructed non-system interchanges described in Section 5.C.4 and as shown in Figure 5-12. Where used, the Non-System Interchange Overhead Arrow-per-Lane guide sign at the exit shall be located at or in the immediate vicinity of the point where the exiting lanes begin to diverge from the through lanes. Non-System Interchange Overhead Arrow-per-Lane guide sign at the exit shall not be located at or near the theoretical gore.

At existing or non-reconstructed locations where Exit Direction signs exist at the theoretical gore, the existing sign support structure may remain in place, continuing to use Exit Direction signs, in conjunction with a replacement of the advance signs using the Non-System Interchange Overhead Arrow-per-Lane guide sign design (See Figure 5-13).

If existing Exit Direction signs are being retained at a non-system interchange as provided above, a Non-System Interchange Overhead Arrow-per-Lane guide sign shall not be used at the location of the Exit Direction signs at or in the vicinity of the theoretical gore. New installations of Exit Direction signs at the theoretical gore shall not be permitted in conjunction with Non-System Interchange Overhead Arrow-per-Lane guide signs on new or reconstructed facilities.

Non-System Interchange Overhead Arrow-per-Lane guide signs shall be located at approximately 1/2 mile and 1 mile in advance of the exit when the Exit Only lane is developed at that sign location. Standard Advance Guide Signs shall be used when Arrow per Lane signs cannot be used.

Non-System Interchange Overhead Arrow-per-Lane guide signs used on non-system interchanges shall include one arrow above each exit only lane and each option lane(s) and shall be designed in accordance with the following criteria:

- A - The shaft of each arrow shall be located approximately over the center of the lane to which it applies.
- B - The arrow for a lane that must exit shall be curved in the direction of the exit and shall be accompanied by black-on-yellow EXIT (E11-1a) and ONLY (E11-1b) sign panels adjacent to the lower end of the arrow shaft. Where the through lanes curve and the exit continues on a straight alignment, upward-pointing vertical arrows shall be used for the exiting movement and curved arrows for the through movement.
- C - The arrow for an optional exit lane that also carries the through route shall have a single shaft that bifurcates into a vertically upward-pointing arrow and a curving arrow corresponding to the configuration of the through and exit lanes.
- D - The distance to the exit shall be displayed below the destination on the advance sign at the 1-mile location and any additional Advance Guide signs in advance of the 1-Mile sign location.

⁶⁴ See [MUTCD Section 2E.23](#)

- E - The distance to the exit shall be displayed below the destination on the advance sign at the 1/2-mile location when an entrance ramp enters the highway between the 1-Mile Advance Guide sign and the 1/2-mile sign.
- F - The number of lanes displayed on a sign shall correspond to the number of exit only and option lanes at the location of that sign. An advance sign shall not depict lanes that are added downstream of a sign location.
- G - For numbered exits, the Exit Number (E1-5P) or Left Exit Number (E1-5bP) plaque shall be used at the top of the sign in accordance with Section 5.C.12.
- H - When overlapping system and non-system interchanges are required to use Overhead Arrow-per-Lane signs, the Overhead Arrow-per-Lane legends shall be the sizes shown for system interchanges in MUTCD Table 2E-5.

Overhead Arrow-per-Lane guide signs used on Non-System Interchanges should be designed in accordance with the following additional criteria:

- A - No more than one destination should be displayed for each movement.
- B - The arrowhead(s) for the diverging movement should be positioned lower on the sign than the arrowhead(s) for the movement that continues straight ahead, independent of which movement carries the through route.
- C - Route shields, cardinal directions, and destinations should be positioned on the sign such that they are clearly related to the arrowhead(s) for the movement to which they apply.
- D - The cardinal direction should be placed adjacent to the route shield for exits leading in a single cardinal direction. When the exit leaves the right side of the highway, the cardinal direction, if used, should be positioned to the right of route shield. When the exit leaves the left side of the highway, the cardinal direction, if used, should be positioned to the left of route shield.

Non-System Interchange Overhead Arrow-per-Lane guide signs shall not be used to depict a downstream split of an exit ramp on a sign located on the mainline.

Where extra emphasis of an especially low advisory ramp speed is needed, an EXIT XX MPH (E13-2) sign panel (see MUTCD Figure 2E-27) may be placed below the applicable destination legend to supplement, but not to replace, the exit or ramp advisory speed warning signs.

Advance Guide signs that are mounted overhead shall not display a down arrow over an option lane.

Figure 5-12 Signing for a Two-Lane Non-System Interchange Exit with an Option Lane and a Dropped Lane, Standard Installation.

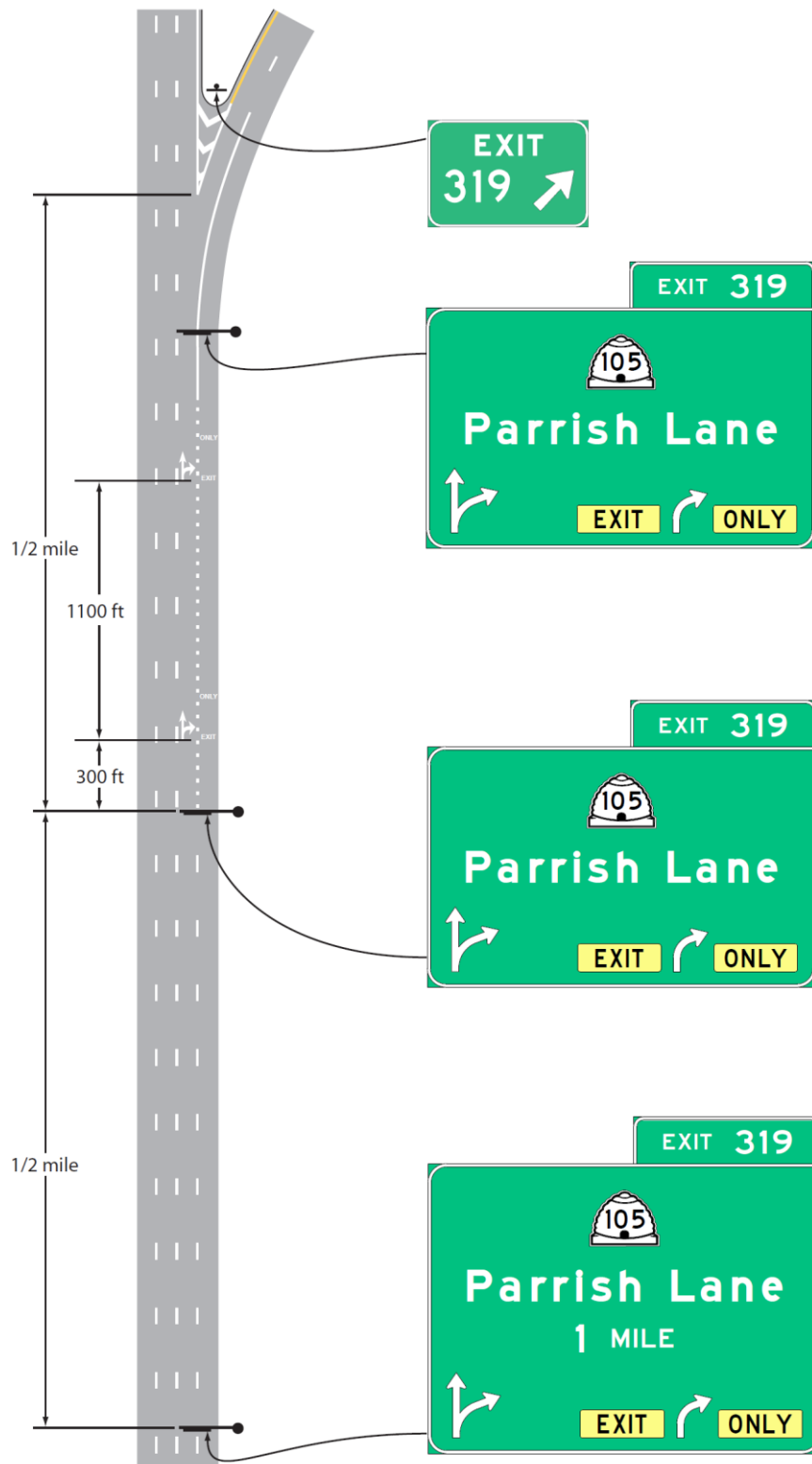
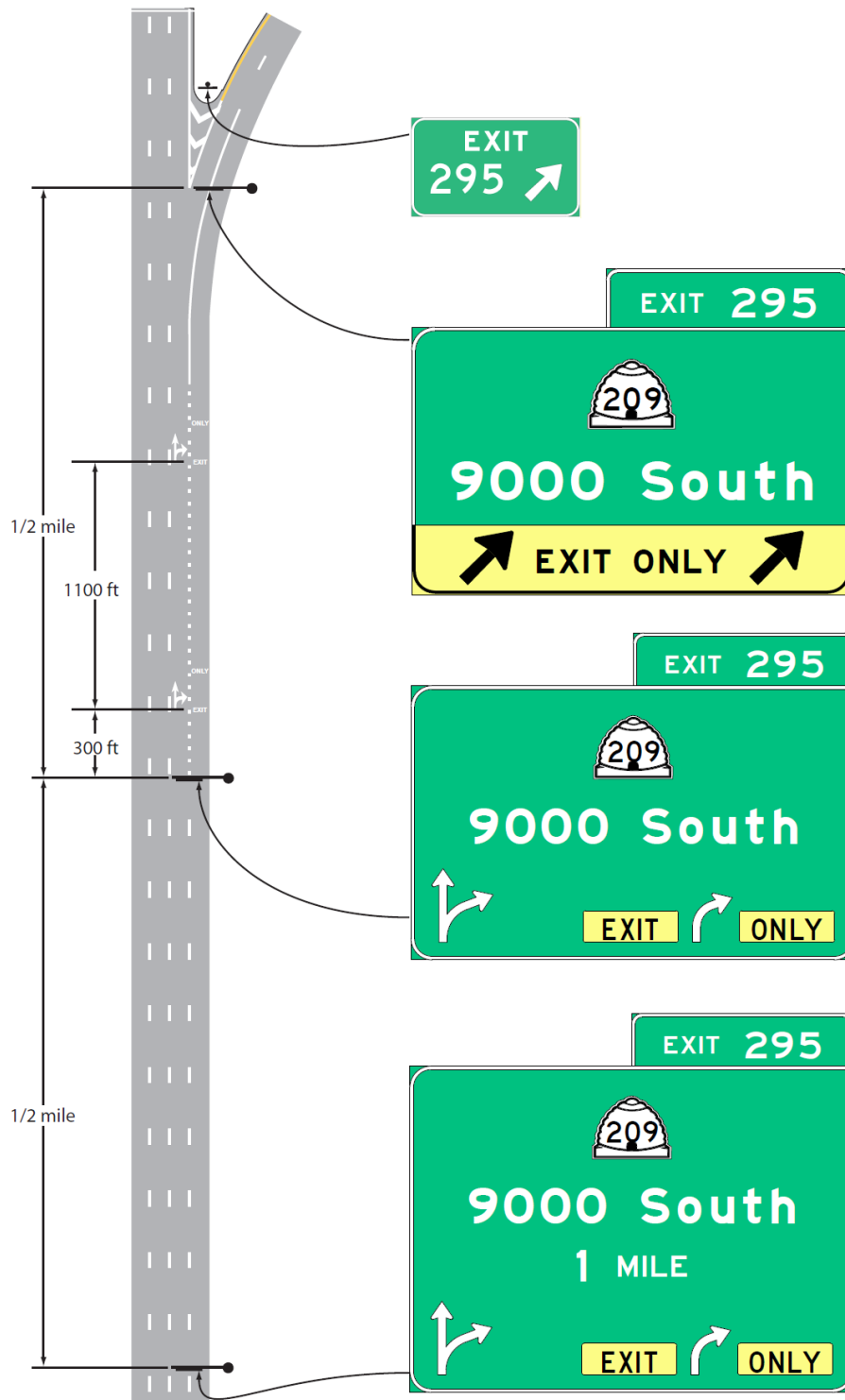


Figure 5-13 Signing for a Two-Lane Non-System Interchange Exit with an Option Lane and a Dropped Lane, Existing Exit Directional Guide Sign Installation.



5.C.7. Signing for Interchange Lane Drops (without optional lanes)⁶⁵

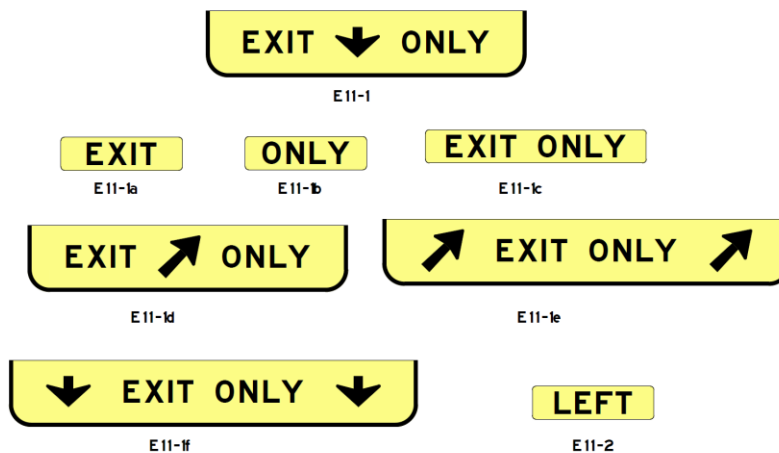
The provisions of this Section shall only apply to lane drops at exits that do not have an optional exit lane. At exits that have an optional exit lane in addition to the dropped lane provisions of Sections 5.C.4 through 5.C.6 shall apply.

Major guide signs for all lane drops at interchanges shall be mounted overhead.

An EXIT ONLY sign panel (see Figure 5-14 or [MUTCD Figure 2E-13](#)) shall be used for all interchange lane drops where the through route is carried on the mainline.

The EXIT ONLY (down arrow) (E11-1) sign panel shall be used on all signing of lane drops on overhead Advance Guide signs (see Figures 5-15 and 5-16).

Figure 5-14 Exit Only Panels



The number of arrows on each sign shall correspond to the number of dropped lanes at the location of each sign. Placement of the down arrow shall comply with the provisions of Section 5.A.6.

For lane drops, the Exit Direction sign shall be of the format shown in

Figure 5-15 or Figure 5-16. The bottom portion of the Exit Direction sign shall be yellow with a black border and shall include a diagonally upward-pointing

black directional arrow (left or right) for each lane dropped at the exit, with the sign designed and placed so that each arrow is located over the approximate center of each lane being dropped. The words EXIT and ONLY shall be positioned to the left and right, respectively, of the arrow on the E11-1d sign panel for a single-lane drop. For a two-lane drop, the words EXIT ONLY shall be located between the two arrows on the E11-1e sign panel.

EXIT ONLY messages of either the combination of E11-1a and E11-1b, or E11-1c formats may be used to retrofit existing signing to warn of a lane drop situation ahead.

If used to retrofit an existing Advance Guide sign, the E11-1a and E11-1b sign panels shall be placed on either side of a white down arrow. The E11-1c sign panel, if used to retrofit an existing sign, shall be placed between the lower destination message and the white down arrow.

Except as provided below for closely spaced auxiliary lanes, Advance Guide signs for lane drops within 1 mile of the interchange should not contain the distance message.

⁶⁵ See [MUTCD Section 2E.24](#)

Where the dropped lane is an auxiliary lane that is provided between successive entrance and exit ramps of two separate interchanges and the distance between the two ramps is less than 1 mile, the first Advance Guide sign in the sequence downstream from the entrance ramp should contain the distance message.

Wherever the dropped lane carries the through route, signs should be used without the EXIT ONLY sign panel.

The MUTCD [Section 2B.23](#) contains information regarding regulatory signs that can also be used for freeway lane drop situations and MUTCD [Section 2C.42](#) contains information regarding warning signs that can also be used for freeway lane drop situations.

Figure 5-15 Interchange Exit Direction Sign Double Lane



Figure 5-16 Interchange Exit Direction Sign Single Lane



GS4-1

Figure 5-17 Guide Signs for a Single-Lane Exit to the Right with a Dropped Lane

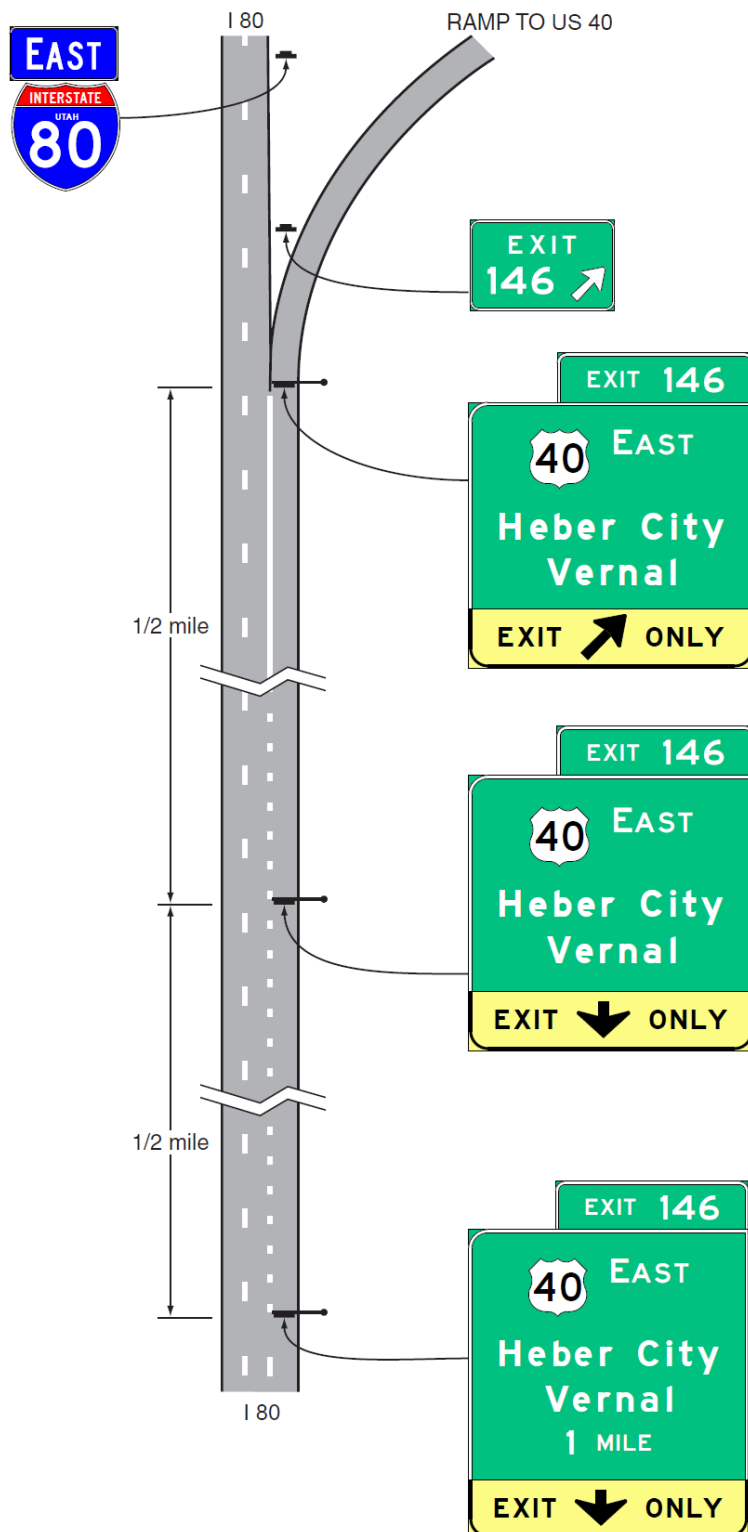
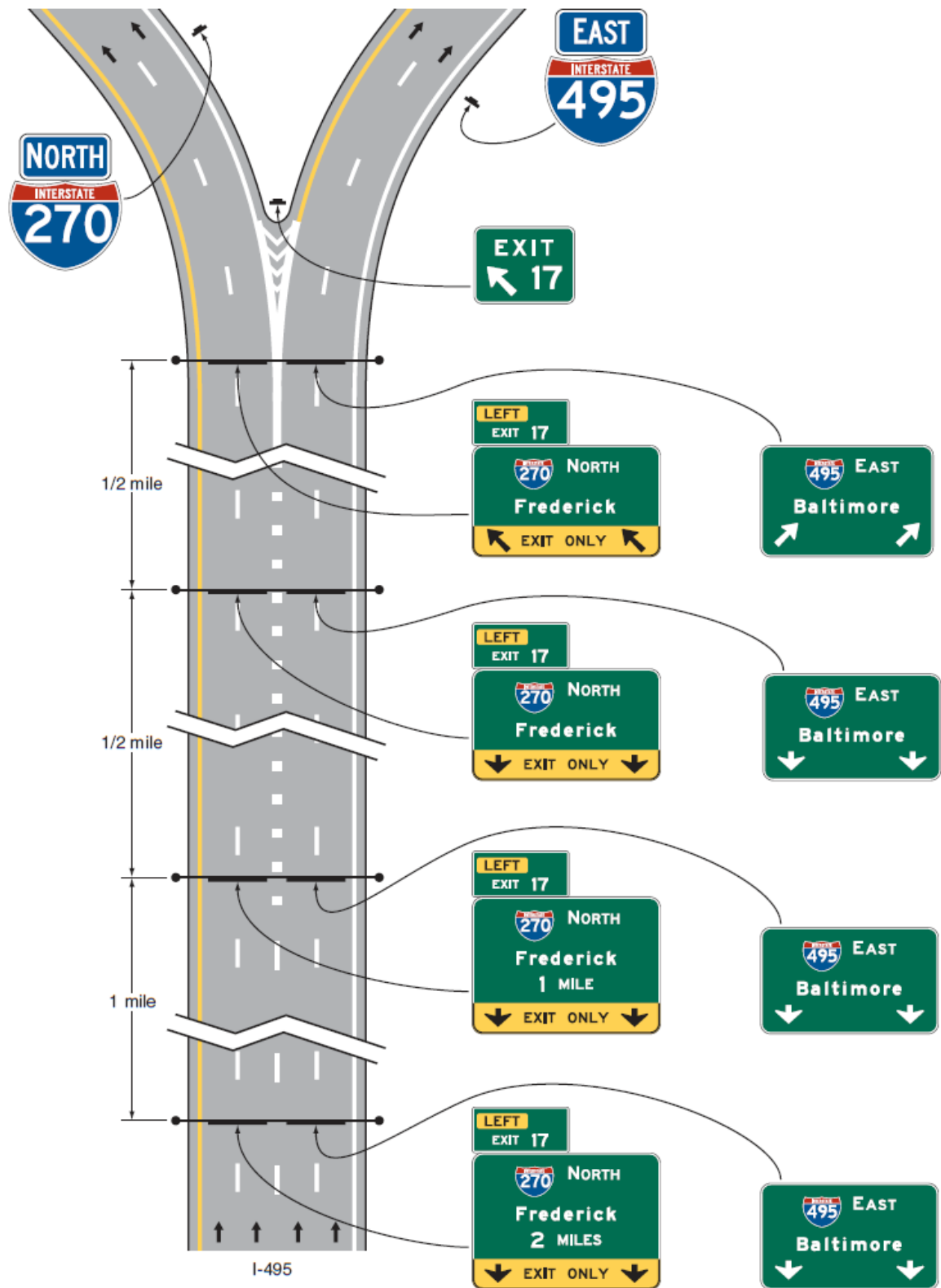


Figure 5-18 Guide Signs for Lane Split with Dedicated Lanes



5.C.8. Diagrammatic Signs⁶⁶

Diagrammatic signs are signs that show a graphic view of the roadway arrangement, intended action, or special condition. Diagrammatic guide signs have been shown to be less effective than conventional or Overhead Arrow-per-Lane guide signs at conveying the destination or direction(s) that each approach lane serves. Care must be taken to not confuse drivers with excessive messages and complex diagrams.

The use of Diagrammatic guide signs is not preferred. Contact UDOT Traffic and Safety for more information prior to using them.

5.C.9. Route signs⁶⁷

The official Route sign for the Interstate Highway System shall be the red, white, and blue retroreflective distinctive shield adopted by the American Association of State Highway and Transportation Officials (see Section 5.B.3).

When used along a freeway, a highway built to freeway standards, or an expressway, Route signs (Interstate, US, and State) shall be 36 x 36-inch minimum size for routes with one or two digits and 45 x 36-inch minimum size for routes with three digits as shown in this Manual and the SHSM book and the USHSS. All Route Sign Auxiliaries used with these signs shall be sized accordingly.

Interstate Route signs shall contain the word UTAH in white upper-case letters on the blue background (See Figure 5-2).

Route signs should be incorporated as cut-out shields or other distinctive shapes on large directional guide signs. Where the Interstate shield is displayed in an assembly or on the face of a guide sign with U S, or State route signs, the Interstate numeral should be at least equal in size to the numerals on the other Route signs. The use of independent Route signs should be limited primarily to route sign assemblies. See Section 5.B.15 for guidance concerning the order and position of route assemblies within a group assembly.

Route signs and auxiliary signs showing junctions and turns should be used for guidance on approach roads, for route confirmation just beyond entrances and exits, and for reassurance along the freeway or expressway. When independently-mounted Route signs are used in place of Pull-Through signs (see Section 5.C.3), they should be located just beyond the exit.

If an interstate route sign and its auxiliary signs are combined to form a single guide sign, either by itself or in combination with US or State route signs and their auxiliary signs, the background color of the sign shall comply with Section 5.B.4.

Independently-mounted Route signs may be used instead of Pull-Through signs as confirmation information (see Section 5.C.3).

5.C.10. At-Grade Intersection Signs⁶⁸

If there are intersections at grade within the limits of an expressway, guide sign types provided in section 5.B should be used. However, such signs should be of a size compatible with the size of other signing on the expressway.

⁶⁶ See [MUTCD Section 2E.22](#)

⁶⁷ See [MUTCD Section 2E.27](#)

⁶⁸ See [MUTCD Section 2E.29](#)

5.C.11. Interchange Guide Signs⁶⁹

The signs at interchanges and on their approaches shall include Advance Guide signs and Exit Direction signs. Consistent destination messages shall be displayed on these signs.

New destination information should not be introduced into the major sign sequence for one interchange, nor should destination information be dropped.

Reference should be made to Sections 5.C.2 and 5.C.14 through 5.C.22 for a detailed description of the signs in the order in which they should appear at the approach to and beyond each interchange. Guide signs placed in advance of an interchange deceleration lane should be spaced at least 800 feet apart.

Supplemental guide signing should be used sparingly, as provided in Section 5.C.16.

5.C.12. Interchange Exit Numbering⁷⁰

Interchange exit numbering provides valuable orientation for the road user on a freeway or expressway. The feasibility of numbering interchanges or exits on an expressway will depend largely on the extent to which grade separations are provided. Where there is appreciable continuity of interchange facilities, interrupted only by an occasional intersection at grade, the numbering will be helpful to the expressway user.

Interchange numbering shall be used in signing each freeway interchange exit. Interchange exit numbers shall be displayed with each Advance Guide sign, Exit Direction sign, and Exit Gore sign. The exit number shall be displayed at the top of the Advance Guide or Exit Direction sign in a separate plaque. The Exit Number (E1-5P series) plaque shall include the word EXIT and the appropriate exit number in a single-line format. Suffix letters shall be used for exit numbering at a multi-exit interchange. The suffix letter shall also be included on the Exit Number plaque and shall be separated from the exit number by a space having a width of between 1/2 and 3/4 of the height of the suffix letter. Exit numbers shall not include the cardinal initials corresponding to the directions of the cross route. Minimum numeral and letter sizes are discussed in Section 5.A.2 of this manual. If used, the interchange numbering system for expressways shall comply with the provisions prescribed for freeways.

In addition to the requirements of the previous paragraph, design the Exit Number (E1-5P) plaque as part of the attached guide sign. Do not place the bottom border, center the legend in the green field, and use square corners in place of the radii on the bottom of the Exit Number plaque and the adjacent guide sign corner (See Figure 5-19 and the USHSS).

At a multi-exit interchange where suffix letters are used for exit numbering, an exit of the same number without a suffix letter shall not be used on the same route in the same direction. For example, if an exit is designated as EXIT 256 A, there shall not be an exit designated as EXIT 256 on the same route in the same direction.

Interchange exit numbering shall use the reference location sign exit numbering method (See MUTCD Figures 2E-19 through 2E-21). The consecutive exit numbering method shall not be used.

⁶⁹ See [MUTCD Sections 2E.30](#)

⁷⁰ See [MUTCD Section 2E.31](#)

The Department uses reference location sign numbering for interchange exits for two primary reasons: (1) if new interchanges are added to a route, the Department does not have to change the numbering sequence; and (2) reference location sign numbering assists road users in determining their destination distances and travel mileage.

Exit numbers may also be used with Supplemental Guide signs and Motorist Service signs.

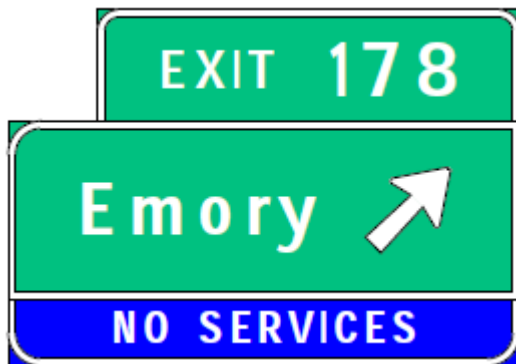
Exit Number plaques shall be added to the top right-hand edge of the interchange guide sign for an exit to the right.

Because road users might not expect an exit to the left and might have difficulty in maneuvering to the left, a left Exit Number plaque⁷¹ shall be added to the top left-hand edge of the sign for all left-hand exits.

The word LEFT on the E1-5bP plaque shall be a black legend on a yellow rectangular sign panel and shall be centered above the word EXIT.

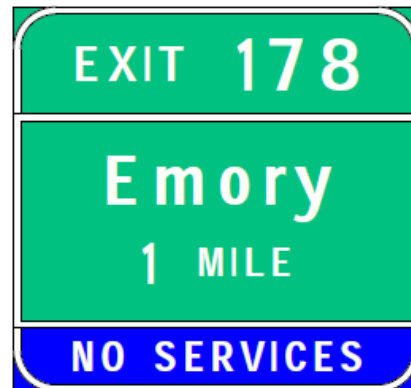
If the design width of an Exit Number plaque is within 18 inches of the accompanying guide sign, then the exit number legend shall be incorporated in the top part of the guide sign instead of using an Exit Number plaque (see Figure 5-20). The widest legend shall dictate the sign width.

Figure 5-19 Exit Number Plaque on a Guide Sign



GS9-1

Figure 5-20 Exit Number Legend Incorporated in a Guide Sign



GS9-3

For circumferential routes, interchange numbering shall be in a clockwise direction. The numbering shall begin with the first interchange west of the south end of an imaginary north-south line bisecting the circumferential route, at a radial freeway or other Interstate route, or some other conspicuous landmark in the circumferential route near a south polar location (see [MUTCD Figure 2E-19](#)).

The interchange numbers on loop routes shall begin at the loop interchange nearest the south or west mainline junction and increase in magnitude toward the north or east mainline junction. Spur route interchanges shall be numbered in ascending order starting at the interchange where the spur leaves the mainline route (see [MUTCD Figure 2E-20](#)).

Where numbered routes overlap, continuity of interchange numbering shall be established for only one of the routes (see [MUTCD Figure 2E-21](#)). If one of the routes is an Interstate

⁷¹ See [MUTCD Figure 2E-22](#)

and the other route is not an Interstate, the Interstate route shall maintain continuity of interchange numbering.

The route chosen for continuity of interchange numbering should also have reference location sign continuity (see [MUTCD Figure 2E-21](#)).

5.C.13. Interchange Classification⁷²

For signing purposes, interchanges are classified as major, intermediate, and minor. Lettering sizes are based on this classification and are discussed in Section 5.A.2. Descriptions of these classifications are as follows:

- A- Major interchanges are subdivided into two categories:
 - (a) Interchanges with other expressways or freeways, or
 - (b) Interchanges with high-volume multi-lane highways, principal urban arterials or major rural routes where the volume of interchanging traffic is heavy or includes many road users unfamiliar with the area.
- B - Intermediate interchanges are those with urban and rural routes not in the category of major or minor interchanges.
- C - Minor interchanges include those where traffic is local and very light, such as interchanges with land service access roads. Where the sum of exit volumes is estimated to be lower than 100 vehicles per day in the design year, the interchange is classified as minor. There are very few minor interchanges in the state.

5.C.14. Advance Guide Signs⁷³

The Advance Guide sign gives notice well in advance of the exit point, of the principal destinations served by the next interchange and the distance to that interchange (see [MUTCD Figure 2E-22](#)).

For major and intermediate interchanges (see Section 5.C.13), Advance Guide signs should be placed at 1/2 mile and at 1 mile in advance of the exit. At minor interchanges, only one Advance Guide sign should be used. It should be located 1/2 or 1 mile from the exit gore. If the sign is located less than 1/2 mile from the exit, the distance displayed should be to the nearest 1/4 mile.

Fractions of a mile, rather than decimals, should be displayed in all cases.

The destination names displayed on Advance Guide signs shall be the same for both directions of travel.

The amount of Legend should comply with the provisions of Section 5.A.3. No more than two destination names or one street name shall be displayed on any Advance Guide sign or Exit Direction sign. A city name and street name shall not be used on the same sign.

Pictographs (see Section 2.E) shall not be displayed on Guide signs.

For numbered exits to the right, an Exit Number plaque shall be added to the top right-hand edge of the sign.

For numbered exits to the left, a left Exit Number (E1-5bP) plaque (see [MUTCD Figure 2E-22](#)) shall be added to the top left-hand edge of the sign.

⁷² See [MUTCD Section 2E.32](#)

⁷³ See [MUTCD Section 2E.33](#)

For non-numbered exits to the left, a LEFT (E1-5aP) plaque (see MUTCD Figure 2E-22) shall be added to the top left-hand edge of the sign.

Section 5.C.12 contains additional information regarding exit numbering.

Advance Guide signs for multi-lane exits having an optional exit lane that also carries the through route (see Figure 5-10 and 5-12) and for splits with an option lane (see Figure 5-11) shall be Overhead Arrow-per-Lane signs designed in accordance with Sections 5.C.4 through 5.C.5.

Except as provided in Sections 5.C.6 and 5.C.7, Advance Guide signs, if used, shall contain the distance message.

The legend on the Advance Guide signs shall be the same as the legend on the Exit Direction sign, except that the last line shall read EXIT XX MILES. If the interchange has two or more exit roadways, the bottom line shall read EXITS XX MILES.

Where interchange exit numbers are used, the word EXIT(S) may be omitted from the bottom line.

The first Advance Guide sign may not be placed so as to overlap the signing for the previous exit. Duplicate Advance Guide signs or Interchange Sequence Series signs may be placed in the median on the opposite side of the roadway and are not included in the minimum requirements of interchange signing.

Where there is less than 800 feet between interchanges, Interchange Sequence Series signs (see Section 5.C.20) should be used instead of Advance Guide signs for the affected interchanges.

5.C.15. Next Exit Plaques⁷⁴

Where the distance to the next interchange is unusually long, a Next Exit plaque may be installed to inform road users of the distance to the next interchange (see [MUTCD Figure 2E-23](#)).

The Next Exit plaque should not be used unless the distance between successive interchanges is more than 5 miles.

The Next Exit plaque shall carry the legend NEXT EXIT XX MILES. If the Next Exit plaque is added to an existing sign, it shall be placed below the Advance Guide sign nearest the interchange. It shall be mounted so as to not adversely affect the breakaway feature of the sign support structure.

The legend for the Next Exit plaque may be displayed in either one or two lines. The one-line message is the more desirable choice, unless the message causes the sign to have a horizontal dimension greater than that of the Advance Guide sign.

5.C.16. Other Supplemental Guide Signs⁷⁵

See UDOT Policy 06C-31 for specific information related to the supplemental and service signs.

⁷⁴ See [MUTCD Section 2E.34](#)

⁷⁵ See [MUTCD Section 2E.35](#)

Supplemental Guide signs can be used to provide information regarding destinations accessible from an interchange, other than places displayed on the Advance Guide Signs. However, such Supplemental Guide signing can reduce the effectiveness of other more important guide signing because of the possibility of overloading the road user's capacity to receive visual messages and make appropriate decisions.

No more than one Supplemental Guide sign should be used on each interchange approach.

A Supplemental Guide sign (see [MUTCD Figure 2E-24](#)) shall not list more than three destinations. Destination names should be followed by the interchange number (and suffix), or if interchanges are not numbered, by the legend NEXT RIGHT or SECOND RIGHT or both, as appropriate. The Supplemental Guide sign should be installed as an independent guide sign assembly.

Where two or more Advance Guide signs are used, the Supplemental Guide sign should be installed approximately midway between two of the Advance Guide signs. If only one Advance Guide sign is used, the Supplemental Guide sign should follow it by at least 800 feet. If the interchanges are numbered, the interchange number should be used for the action message.

Guide signs directing drivers to park - ride facilities shall be considered as Supplemental Guide signs (see [MUTCD Figure 2E-25](#)).

A pictograph shall not be used on a Supplemental Guide sign in conjunction with a destination that is associated with governmental agencies, military bases, universities, or other government-approved institutions.

When a transit pictograph is displayed on the park-ride Supplemental Guide sign, it shall be located on the same line as the carpool symbol, if used, above the word legend.

A pictograph representing a State, county, or municipal corporation or other incorporated or unincorporated community shall not be displayed on a Supplemental Guide sign.

Pictographs shall otherwise comply with the provisions of MUTCD Chapter 2.E.

Guide signs directing drivers to airports shall be considered as Supplemental Guide signs (see MUTCD Figure 2E-25a).

An airport Supplemental Guide sign shall not be used if the airport is located more than 15 miles from the freeway.

Supplemental Guide signs for airports without the name of the airport may be used if the airport is located less than 15 miles from the freeway.

Supplemental Guide signs for airports including the name of the airport may be used if the airport provides regularly scheduled commercial service and is located less than 15 miles from the freeway.

5.C.17. Exit Direction Signs⁷⁶

The Exit Direction sign repeats the route and destination information that was displayed on the Advance Guide sign (see Section 5.C.14) for the next exit, and assures road users of the destination served, and indicates whether they exit to the right or left for that destination.

⁷⁶ See [MUTCD Section 2E.36](#)

Exit Direction signs shall be used at major, intermediate, and minor interchanges. Populations or other similar information shall not be displayed on Exit Direction signs.

Post-mounted Exit Direction signs should be installed at the beginning of the deceleration lane. If there is less than 300 feet from the upstream end of the deceleration lane to the theoretical gore (see [MUTCD Figure 3B-8](#)), the Exit Direction sign should be installed overhead over the exiting lane in the vicinity of the theoretical gore.

Except where Overhead Arrow-per-Lane guide signs are used (see Sections 5.C.5 and 5.C.6) where a through lane is being terminated (dropped) at an exit, the Exit Direction sign shall be placed overhead at the theoretical gore (see [MUTCD Figures 2E-8](#) and [2E-10](#)).

Where Overhead Arrow-per-Lane guide signs are used for the Advance Guide sign(s) for a multi-lane exit having an optional exit lane that also carries the through route or for a split with an option lane (see Section 5.C.5), an Overhead Arrow-per-Lane guide sign shall also be used instead of the Exit Direction sign. This Overhead Arrow-per-Lane guide sign shall include the appropriate Exit Number Plaque (E1-5P or E1-5bP) plaque and it shall be located near, but not downstream from, the point where the outside edge of the dropped lane begins to diverge from the mainline (see Figure 5-10 through Figure 5-12)

The following provisions shall govern the design and application of the overhead Exit Direction signs:

- The sign shall carry the exit number (if exit numbering is used), the route number, cardinal direction, and destination, as applicable, with an appropriate upward-pointing directional arrow (see [MUTCD Figure 2E-26](#)).
- The message EXIT ONLY in black on a yellow sign panel (E11-1d or E11-1e) shall be used on the overhead Exit Direction sign to advise road users of a lane drop situation. The sign shall conform to the provisions of Section 5.C.7.

For numbered exits to the right, an Exit Number plaque shall be added to the top right-hand edge of the sign.

For numbered exits to the left, a left Exit Number (E1-5bP) plaque (see [MUTCD Figure 2E-22](#)) shall be added to the top left-hand edge of the sign.

Section 5.C.12 contains additional information regarding exit numbering.

A LEFT (E1-5aP) plaque (see [MUTCD Figure 2E-22](#)) shall be added to the top left-hand edge of the sign.

In some cases, principally in urban areas, where restricted sight distance because of structures or unusual alignment make it impossible to locate the Exit Direction sign without violating the required minimum spacing (see Section 5.C.14) between major guide signs, Interchange Sequence signs (see Section 5.C.20) may be substituted for an Advance Guide sign.

At multi-exit interchanges, the Exit Direction sign should be located directly over the exiting lane for the first exit. At the same location, and normally over the right-hand through lane, an Advance Guide sign for the second exit should be located. Only for those conditions where the through movement is not evident should a confirmatory message (Pull-Through sign as shown in Figure 5-9 be used over the left lane(s) to guide road users traveling through an interchange. In the interest of sign spreading, three signs on one structure should not be used. When the freeway or expressway is on an overpass, the Exit Direction sign should be installed on an overhead support over the exit lane in advance of the gore point.

Where extra emphasis of an especially low advisory ramp speed is needed, an EXIT XX MPH (E13-2) sign panel (see [MUTCD Figure 2E-27](#)) may be placed at the bottom of the Exit Direction sign to supplement, but not to replace, the exit or ramp advisory speed warning signs.

5.C.18. Exit Gore Signs⁷⁷

The Exit Gore sign in the gore area indicates the exiting point or the place of departure from the main roadway. Consistent application of this sign at each exit is important. The theoretical gore is the point where the mainline and ramp edge lines come together.

The Exit Gore sign shall be located in the gore and shall carry the word EXIT or EXIT XX (if interchange numbering is used) and an appropriate upward slanting arrow. If suffix letters are used for exit numbering at a multi-exit interchange, the suffix letter shall also be included on the Exit Gore sign and shall be separated from the exit number by a space having a width of between 1/2 and 3/4 of the height of the suffix letter. Breakaway or yielding supports shall be used.

Where extra emphasis of an especially low advisory ramp speed is needed, an E13-1 plaque indicating the advisory speed may be mounted below the Exit Gore sign (see [MUTCD Figure 2E-28](#)) to supplement, but not to replace, the exit or ramp advisory speed warning signs.

5.C.19. Post-Interchange Distance Signs⁷⁸

If used, the Post-Interchange Distance sign shall consist of a two- or three-line sign carrying the names of significant destination points and the distances to those points. The top line of the sign shall identify the next meaningful interchange with the name of the community near or through which the route passes, or, if there is no community, the route number or name of the intersected highway (see Figure 5-19). The minimum sizes of the route shields identifying a significant destination point are prescribed in MUTCD Tables 2E-3 and 2E-5.

The text identification of a route may be displayed instead of a route shield, such as "US XX," "SR XX," or "County Route XX."

All three destinations should be used whenever practical.

The top destination should identify the next community or point from which motorist services are available within fifteen (15) miles of the interchange. If more than one community or point is served by the interchange, the nearest community or point shall be designated.

The middle destination should identify one of the communities or points in Table 5-2.

The distance displayed for each community should comply with the provisions of MUTCD Section 2D.41.

⁷⁷ See [MUTCD Section 2E.37](#)

⁷⁸ See MUTCD Section 2E.39

Table 5-2 Middle Destination for Post-Interchange Distance Signs

I-15	I-70	I-80	I-84
St George	Richfield	Wendover	Snowville
Cedar City	Salina	Tooele	Tremonton
Beaver	Green River	Park City	Morgan
I-70		I-84	I-80
Fillmore			
Nephi			
Provo			
Brigham City			
Tremonton			

These communities and points have been selected based on motorist interest, available services, and strategic geographical location. Other cities or points may, from time to time, be identified on the middle destination, provided the above cities or points in Table 5-2 have been signed for on the previous and subsequent distance signs. The middle destination may be varied on successive distance signs to give motorists maximum information concerning cities or points served by the Interstate system.

The bottom destination shall contain the name and distance to a National Control City from the list of National Control Cities designated by AASHTO. See Table 5-3.

If two interstate routes are concurrent, the distance signs may identify two National Control Cities on the middle and bottom destinations. The closer National Control City shall be shown as the middle destination and the farther as the bottom destination.

Table 5-3 The National Control Cities used in Utah

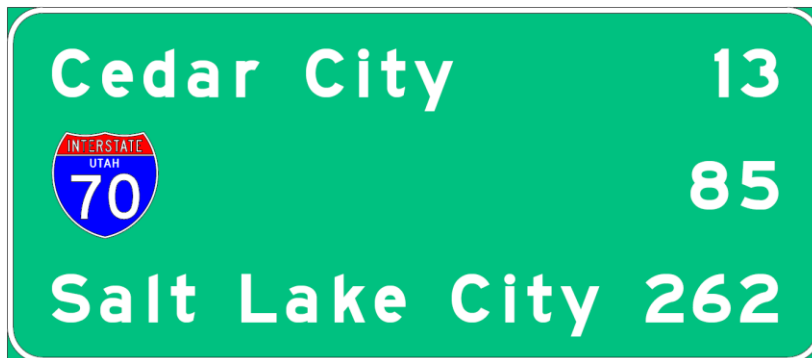
I-15	I-70	I-80	I-84
Las Vegas	I-15	Reno	Ogden
Salt Lake	Grand Junction	Salt Lake	Twin Falls
Ogden		Cheyenne	
Pocatello			

When distance signs are placed on a route that exits the state, the distance sign should identify communities or points that are in the neighboring state.

Distances to the same destination should not be shown more frequently than at five (5) mile intervals. When there are closely spaced interchanges for a community or urban area the distance sign should be placed after the last interchange. The spacing between distance signs should not exceed twenty (20) miles.

The mileage shown shall be the actual distance to the destination and not to the exit from the freeway or the expressway. It shall be along the most direct route, as measured to the nearest rounded down mile to a central location of the destination (i.e., coordinate center, government offices, significant crossroad, or landmark. The distance difference displayed between destinations on successive signs should not vary.

Figure 5-21 Example Post-Interchange Distance Sign



DS2-3a

The process to determine the mileage number to be placed on Interstate Distance Signs will be determined by using Table 5-4 as follows:

- A - Determine the physical location of the distance sign. The typical location is the third sign of the post interchange series, located approximately 2500 feet beyond the end of the acceleration lane of the entrance ramp (MUTCD Section 2E.39).
- B - Determine the Reference Post location of the distance sign.
- C - Using the values in Table 5-5, calculate the difference between the Reference Post of the structure point of the destination, and the Reference Post of the distance sign.

- This is the mileage from the sign location to the center of the structure at the exiting interchange (or the beginning/end of the route).
- D - Using the values in Table 5-4, add the distance from the interstate (or beginning/end of route) to the central location of the destination to the distance determined in Step C.
 - E - The distance calculated in Step D is the total mileage from the sign location to the central location of the destination
 - F - Round all distances down to the nearest whole number. Fractions are not to be used on distance signs.

Example:

A distance sign is placed after the south bound on ramp from Exit 222, Nephi South Main Street, at RP 221.96.

1. Fillmore is the top destination. The center point of the interchange structure is at RP 166.74. The difference is 55.22 miles. The distance from the interstate to the central location, 1.52 miles, is added and the total distance from the sign to Fillmore is 56.74 miles. When this is rounded down, 56 miles is used.
2. I-70 is the middle destination. The center point of the interchange structure is at RP 132.19. The difference is 89.77 miles. Since there is no distance from the interstate to a central location, the total distance from the sign to I-70 is 89.77 miles. When this is rounded down, 89 miles is used.
3. The south bound Control City, Las Vegas, is the bottom destination. The State line is at RP 0.00 (the beginning of the route). The difference is 221.96 miles. The distance from the State line to the central location, 115.88 miles, is added and the total distance from the sign to Las Vegas is 337.84 miles. When this is rounded down, 337 miles is used.

Table 5-4 Distance to Center of Selected Destinations from Adjacent Interchange

I-15					
Destination (Control Cities in Bold)	Exit Number	Northbound		Southbound	
		Structure/ Point (RP)	Distance from Interstate	Structure/ Point (RP)	Distance from Interstate
Las Vegas				0.00	115.88
St. George	6	6.34	1.86		
St. George	8			8.66	1.40
Cedar City	59	58.85	1.23	58.85	1.23
Parowan	75	75.21	2.55		
Parowan	78			77.80	1.14
Beaver	109	108.75	1.90		
Beaver	112			111.79	1.72
I-70	132	132.19	0.00	132.19	0.00
Fillmore	163	163.37	2.39		
Fillmore	167			166.74	1.52
Nephi	222	222.82	1.89		
Nephi	228			228.09	2.74
Provo	263	263.37	1.79		
Provo	265			265.63	1.37
Salt Lake City	306	307.48	2.01		
Salt Lake City	309			309.33	1.94
Ogden	341	341.59	2.25		
Ogden	343			343.87	2.68
Brigham City	363	363.74	2.32	363.74	2.32
Tremonton	376	376.53	3.45		
Tremonton	381			381.10	2.37
Pocatello		400.59	70.91		
I-80					
Destination (Control Cities in Bold)	Exit Number	Eastbound		Westbound	
		Structure/ Point (RP)	Distance from Interstate	Structure/ Point (RP)	Distance from Interstate
Reno				0.00	397.80
Wendover	2			1.49	1.66
Tooele	99	98.62	12.00	98.62	13.37
Salt Lake City	121	119.59	2.01		
Salt Lake City	306			119.59	2.01
Park City	145	144.20	7.18	144.20	7.18
I-84	168	167.32	0.00	167.32	0.00
Chevenne		196.68	362.27		
I-70					
Destination (Control Cities in Bold)	Exit Number	Eastbound		Westbound	
		Structure/ Point (RP)	Distance from Interstate	Structure/ Point (RP)	Distance from Interstate
I-15				0.00	0.00
Richfield	37	37.15	2.27		
Richfield	40			40.28	1.52
Salina	56	56.72	1.71	56.72	1.71
Green River	160	160.42	1.54		
Green River	164			164.75	2.88
Grand Junction		231.67	32.12		
I-84					
Destination (Control Cities in Bold)	Exit Number	Eastbound		Westbound	
		Structure/ Point (RP)	Distance from Interstate	Structure/ Point (RP)	Distance from Interstate
Twin Falls				0.00	108.95
Snowville	7	7.13	0.20	7.13	0.20
Tremonton	40	40.82	2.04		
Tremonton	376			44.67	3.45
Brigham City	363	57.46	2.32	57.46	2.32
Ogden	343	77.33	2.68		
Ogden	341			79.61	2.25
Morgan	103	103.35	0.86	103.35	0.86
I-80	120	119.77	0.00		

5.C.20. Interchange Sequence Signs⁷⁹

Overhead Interchange sequence signing shall be used on I-15 within Davis, Salt Lake, Utah, Washington (state line to north of SR 9), and Weber counties.

Overhead Interchange Sequence signs shall use a legend size of 16 inches/12 inches for Upper Case/Lower Case, 16 inches for whole numerals, and 12 inches for fraction numerals.

If used, Interchange Sequence signs should be used over the entire length of a route in an urban area. Except as provided in the next paragraph, they should not be used on a single interchange basis

If there is less than 800 feet between interchanges, Interchange Sequence signs should be used instead of the Advance Guide signs for the affected interchanges.

Interchange Sequence signs are generally supplemental to Advance Guide signs. Signing of this type is illustrated in [MUTCD Figures 2E-30](#) and [2E-31](#), and is compatible with the sign spreading concept (see Section 5.C.2).

These signs are installed in a series and display the next three interchanges by name or route number with distances to the nearest 1/4 mile.

If used, the first sign in the series shall be located in advance of the first Advance Guide sign for the first interchange.

Where the exit direction is to the left, a LEFT (E11-2) sign panel (see Figure 5-) shall be displayed on the same line immediately to the right of the interchange names or route numbers.

Interchange Sequence signs shall not be substituted for Exit Direction signs.

Interchange Sequence signs should be located in the median. After the first sign of the series, Interchange Sequence signs should be placed approximately midway between interchanges.

Interchange Sequence signs located in the median shall be installed at overhead sign height (see MUTCD Section 2A.18).

5.C.21. Community Interchanges Identification Signs⁸⁰

For suburban or rural communities served by two or three interchanges, Community Interchanges Identification signs are useful (see [MUTCD Figure 2E-32](#)).

Community Interchanges Identification signs shall not be used in areas where Interchange Sequence signs are required (See Section 5.C.20 and MUTCD Section 2E.40, Paragraph 1) or used.

Where a Community Interchange Identification sign is used, the name of the community followed by the word EXITS should be displayed on the top line; the lines below should display the destination, road name, or route number and each corresponding distance to the nearest 1/4 mile.

⁷⁹ See [MUTCD Section 2E.40](#)

⁸⁰ See [MUTCD Section 2E.41](#)

The sign should be located in advance of the first Advance Guide sign for the first interchange within the community.

If interchanges are not conveniently identifiable or if there are more than three interchanges to be identified, the NEXT XX EXITS sign (see Section 5.C.22) may be used.

5.C.22. NEXT XX EXITS Sign⁸¹

Many freeways or expressways pass cities served by a succession of several interchanges.

Cities served by two or more consecutive interchanges may be indicated by a NEXT XX EXITS sign (see [MUTCD Figure 2E-33](#)) located in advance of the Advance Guide sign or signs for the first interchange.

The sign legend should identify the community followed by the words NEXT XX EXITS.

5.C.23. Destination Guide Signs⁸²

Recreational and cultural interest area symbols shall not be displayed on interchange Advance guide or Exit Direction signs.

Except as provided below, recreational and cultural interest area symbols may only be displayed on a supplemental guide sign and an off-ramp directional sign when the destination on the interchange guide signs is the recreational and cultural interest area.

Recreational and cultural interest area symbols may be displayed on an off-ramp directional sign if the recreational and cultural interest area is within 15 miles of the exit in any direction.

The Winter Recreational Area (RS-077) symbol may be displayed on a supplemental guide sign in accordance with UDOT Policy 06C-31.

⁸¹ See [MUTCD Section 2E.42](#)

⁸² See [MUTCD Section 2M.09](#)

5.C.24. Other Guide Sign References

Table 5-5 presents MUTCD references to additional freeway and expressway signs:

Table 5-5 Additional Freeway and Expressway Sign References in MUTCD

Sign/Topic	MUTCD Section
Signing by Type of Interchange	2E.43
Freeway-to-Freeway Interchange	2E.44
Cloverleaf Interchange	2E.45 and 46
Partial Cloverleaf Interchange	2E.47
Diamond Interchange	2E.48
Diamond Interchange in Urban Area	2E.49
Closely Spaced Interchanges	2E.50
Minor Interchange	2E.51
Weigh Station Signing	2E.54
Acknowledgement Signs	2H.08
Memorial or Dedication Signs	2M.10
Rest Stops	2I.04
Specific Service Signs	2J and 6A.02

5.C.25. Freeway Sign Design Process

Conceptual plans should be discussed and coordinated within the Department during the earliest stages of preliminary design, with additional details being submitted for review as the design develops. Sign designs and locations should be completed and submitted during the plan-in-hand stage. Signs designed for roads built to freeway standards shall be approved by the Traffic and Safety Division. Signs designed for placement on conventional roads shall be approved by the Region Traffic Engineer.

Part 6. WORK ZONE SIGNING

Work zone signing shall conform to the MUTCD, the UDOT Standard Drawings (TC series, <http://www.udot.utah.gov>), and the Utah Standard Highway Signs Supplement (USHSS).

Part 7. SCHOOL ZONE SIGNING

Part 7 of the National MUTCD has been replaced in its entirety by the most current version of the TRAFFIC CONTROLS FOR SCHOOL ZONES Part 7 of the Utah Manual on Uniform Traffic Control Devices. School zone signing shall conform to the MUTCD and the school-related signs in the Utah Standard Highway Signs Supplement (USHSS).